OW PUBLISHED EVERY MONTH! JUNE

STARTLING STORIES

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IN THIS ISSUE

MAN BATTLES MUTANT ON

DRAGON'S ISLAND

By JACK WILLIAMSON

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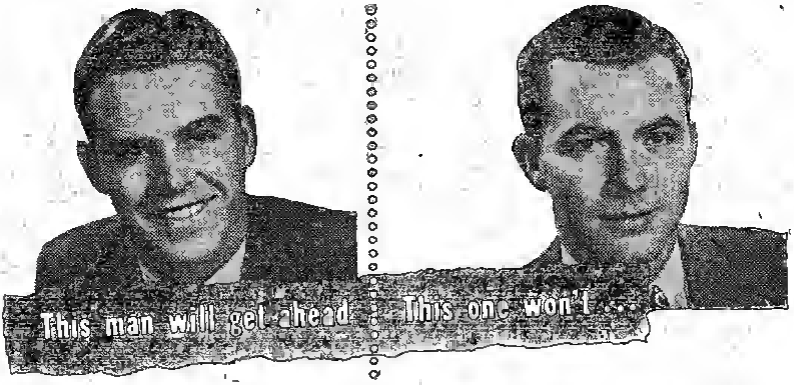

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SS-1

A Science Fiction Department Featuring Letters from Readers

THE makings of a fine ideological brawl were aired in these columns a few issues back. It began with a letter from R. L. Farnsworth which offered the postulate that humanity was rapidly outstripping its food supply and that the future offered a choice of race starvation or flight to new planets. This drew a sharp-tongued reply from Marion Bradley which suggested that the Conquest of Space—with capitals—was small-boy rationalization of man's tendency to run away from his problems instead of staying home and arranging affairs in so workable a fashion that it would not be necessary to keep opening new frontiers.

This is a battle which could be encouraged along several different lines. But coincidentally enough, new information has come to light which applies to the main phase of the question and presents some interesting conjectures of its own.

Economics of Hunger

The economics of hunger afford statistics which can be manipulated as readily as any other kind. Prime pitiful examples in the "population-is-outgrowing-its-food-supply" argument are China and India where famine is a commonplace. China's population averages 104 persons to the square mile. Compare with the U.S. whose index doesn't run much over 45 and you are impressed. But does it make a case? Check against Holland, long-time example of a well-nourished country, and you find the population runs 686 persons a square mile. So why don't the Dutch have famines?

If you consult with the U.S. Department of Agriculture you will learn that China contains 700,000,000 acres of land suitable for producing food, but that only 180,000,000 acres are actually in production.

Among agronomists it seems agreed that it requires two acres of land to produce an adequate diet for one person. China could therefore actually support 1,400,000,000 people instead of starving its present 463,000,000.

The average Chinese farm runs just over four acres and a large proportion of farmers are too weakened by hunger to cultivate that much alone. The only help a farmer can count upon is from his sons, so Chinese farmers are interested in large families—all the more so since they know that famine and disease is going to account for most of their children before they grow big enough to help. Here a pattern begins to take form at once. Doesn't it begin to look as if hunger breeds people instead of vice versa?

India's population has grown from 200,000,000 in 1870 to 450,000,000 in 1951. During the same period, continued famines killed something like 40,000,000 people. Apparently it takes something more than starvation to kill off a race. In fact, our guess that hunger breeds people instead of vice versa is supported by new research findings. Famines breed overpopulation.

The well-nourished countries like Sweden, the U.S. and Australia have a lower birth rate than the poorly nourished countries like Japan, India, China or Formosa. Furthermore if you study the actual figures on protein intake daily and compare them with the birth rate you will find an exact correlation. The better the diet the less fertility. A Stanford University biologist, J. R. Slonaker, proved this point experimentally with rats in 1927; statistics bear out his findings with people.

It ties together. If the diet is good enough to insure a better chance of survival for the young, fewer young are produced. If survival is dubious the young are produced voluminously in the hope that some will survive.

Chemically speaking, a protein deficiency in the diet causes a deterioration of the liver which thereupon functions less efficiently to remove certain hormones from the ovary glands of the female which cause her to sustain a higher level of sexual desire. The longer the low-protein

(Continued on page 127)

KNOWLEDGE
THAT HAS
ENDURED WITH THE
PYRAMIDS

A SECRET METHOD FOR THE MASTERY OF LIFE

WHENCE came the knowledge that built the Pyramids and the mighty Temples of the Pharaohs? Civilization began in the Nile Valley centuries ago. Where did its first builders acquire their astounding wisdom that started man on his upward climb? Beginning with naught they overcame nature's forces and gave the world its first sciences and arts. Did their knowledge come from a race now submerged beneath the sea, or were they touched with Infinite inspiration? From what concealed source came the wisdom that produced such characters as Amenhotep IV, Leonardo da Vinci, Isaac Newton, and a host of others?

Today it is known that they discovered and learned to interpret certain *Secret Methods* for the development of their inner power of mind. They learned to command the inner forces within their own beings, and to master life. This secret art of living has been preserved and handed down throughout the ages. Today it is extended to those who dare to use its profound principles to meet and solve the problems of life in these complex times.

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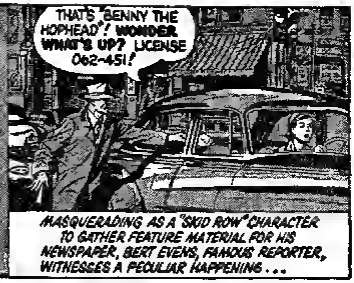
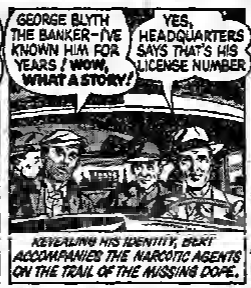
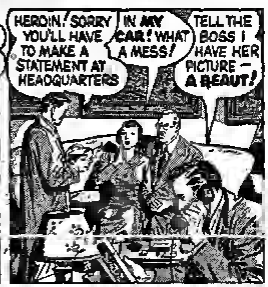
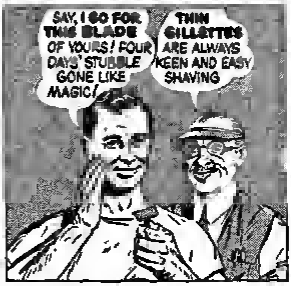


MASQUERADING AS A "SKID ROW" CHARACTER TO GATHER FEATURE MATERIAL FOR HIS NEWSPAPER, BERT EVENS, FAMOUS REPORTER, WITNESSES A PECULIAR HAPPENING...





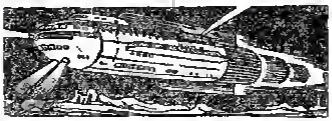
REVEALING HIS IDENTITY, BERT ACCOMPANIES THE NARCOTIC AGENTS ON THE TRAIL OF THE MISSING DOPE.



TEN-BLADE PACKAGE HAS COMPARTMENT FOR USED BLADES

Man's Enduring Dream: THE SPACESHIP

By NORMAN B. WILTSEY



DOWN through the ages from earliest recorded time, earthbound Man has speculated on the moon and the glittering stars and vainly dreamed of voyaging among them.

The bold dream has assumed different forms in different centuries. The Greek writer Lukian in 160 A.D. visioned a ship at sea caught up in a terrible whirlwind and carried to the moon.

Equally fantastic was the idea conceived by Bishop Francis Godwin in 1638. The good English bishop, in his book *The Man in the Moone*, equipped his dashing Spanish hero, Domingo Gonzales, with a unique "engine," powered by a "certain kind of wild Swans." Domingo took off one day for a practice run with his swan-powered aircraft and was considerably astonished when the great birds headed straight for the moon. Flying at about 175 miles an hour, the swan-chariot arrived on the moon after only twelve days of travel (nice going, even for swans!) Gonzales had a fine time sporting around with the inhabitants of the moon—who, according to Bishop Godwin, were larger and wiser than Earthmen and talked in music instead of speech—and then returned to Earth with rare tales to relate to his marveling fellow humans.

The French soldier-poet Cyrano de Bergerac was the first writer in history to hit upon the only possible method of propulsion for spaceships: the action-reaction principle. De Bergerac, somewhat around 1650, wrote of a flying box or aerial car to be lifted by means of large powder rockets.

Ironically, de Bergerac didn't realize the scientific significance of his statement, indeed he had no way of realizing it, since fifty years were to elapse before Sir Isaac Newton was to set forth the reaction principle and more than 200 years were to pass before another Frenchman, Achille Eyraud, described a spaceship propelled by a reaction-motor.

In his novel *Voyage à Venus*, published in Paris in 1865, Eyraud mentions a *moteur à réaction* applying the action-reaction law which governs the flight of the modern rocket. Eyraud's novel, fanciful as it was in plot and content, represented a daring step forward in the scientific thinking of the day. Men began studying seriously the possibility of producing a rocket-ship capable of probing beyond Earth's thin atmospheric envelope into the chill outer realms of airless space. The stage was set, however lightly, for the modern rocket experiments of the American scientist, Robert H. Goddard, from 1929 to 1941, the brilliant work of the German expert Hermann Oberth during the same general period, and the monster V-2 rockets produced by Nazi engineers during World War Two.

The ageless dream continues; the thrilling goal is now clearly in sight in the forseeable future. Who knows: perhaps that whip-smart kid of yours, playing now with his ray-gun and Buck Rogers outfit on the living-room rug at your feet, may be the fearless pioneer to pilot the first of the spaceships beyond the stratosphere!

They watched the mules at work

Many men had tried to solve the mystery of Dragon's Island—and lost their memories! Now it was up to Belfast . . . but Belfast had amnesia!

DRAGON'S ISLAND

A Novel by JACK WILLIAMSON

"Life is a stream. Fluid protoplasm, the eternal stuff of men and dinosaurs and trilobites, it has flowed down the evolving generations of a billion years, its channels always set by the chance pressures of mutation and environment. Always until now—but not forevermore. For now at last life has found its own secret springs, in the structure of the genes. Man may now become his own maker. He can remove the fatal flaws in his own imperfect species, before the stream of life flows on to leave him stranded on the banks of time with the dinosaurs and trilobites—if he will only accept and use the new science of genetic engineering."

Charles Kendrew

I

THE CITY SNARLED. Its sudden hostility was a bitter taste and a biting scent of menace, and a livid glow of danger over everything he saw, and cold peril crawling up the back of his neck. Though his ears heard no warning, alarm crashed inside his brain.

Dane Belfast met that shocking impact when he opened the door of his New York hotel room, at seven that March morning. The unexpected force of it took his breath and drove him backward. He retreated into the doorway, groping dazedly to discover what had hit him.

The maroon-carpeted corridor lay empty. He listened, thinking there must have been some shot or scream, but he could hear nothing more alarming than the muted mutter of traffic on Madison Avenue, twenty floors below. He sniffed to test the air for smoke, but he found no actual odor more disturbing than the faint, stale human scents of tobacco and perfume.

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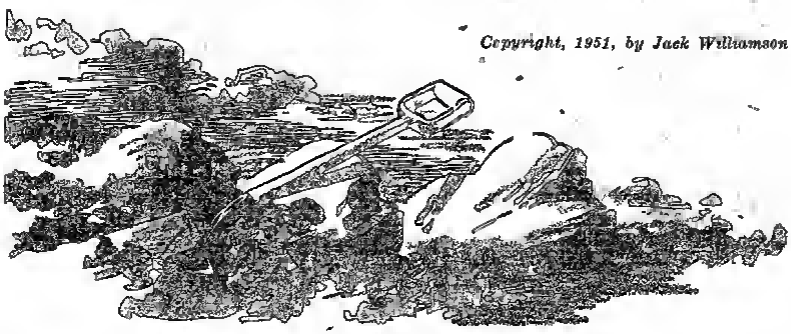

His straining senses found no threat of anything, and he tried at first to ignore what he had felt. He was a scientist, a research geneticist. He had found mysteries enough in the working of the genes and chromosomes, whereby like gives birth to like. He had no time for the inexplicable.

He started resolutely out again toward the elevator. You didn't need to be a professional biologist to know that danger by itself has no taste or feel or warning glow, and he tried for a moment to believe that he had been stricken with a sudden synesthesia—that abnormality of perception in which sounds are seen in color and colors tasted.

But he wasn't ill. He had never been, not even with a cold. Even after the crushing strain of these last months, he felt too hard and fit to be yielding to any fevered imaginings. He was only twenty-five, still clothed in the indestructible vigor of youth. Everything had been all right, until the moment when he opened the door.

He was trying now to swallow that acrid taste of evil, but it clung to his tongue. He blinked against that colorless glare, but still it washed the corridor with a dreary enmity. And danger halted him again, before he could close the door of his room. An invisible yet strangely actual barrier, it delayed him for a few uneasy seconds—long enough to hear the telephone ringing.

He hurried back inside to answer.

"Dane?" The voice was a young woman's, low-pitched and pleasant. "Dr. Dane Belfast?"

She sounded as if she thought she knew him, but he had no friends in New York; no girl friends, certainly.

"I'm Nan Sanderson," she was saying "Of the Sanderson Service. We're on Fortieth, just a few blocks from your hotel. Would you come over to our office this morning, say at eleven?"

"Huh?" He felt sure he had never heard of the Sanderson Service, and he wondered for a moment how the firm had got his name. He had not announced his coming even to Messenger, the financier he meant to see. "What are you selling?"

"Nothing," she answered quietly. "Unless you'd call it life insurance. Because you're in danger, Dr. Belfast. And we can probably save your life."

HER VOICE had a ring of conviction, and her words opened the room to the dark illumination he had met outside. Now that danger-sense was no longer a possible illusion. It was suddenly something real, that he had to accept and explain.

"Danger?" he whispered blankly. "What enemies have I?"

"Enough!" Her voice had a hurried urgency. "Deadly enemies, working cleverly in secret, desperate enough to poison your food or shoot you in the back or stab you while you sleep."

Five minutes ago, he might have laughed at that. Now however, he could feel the frosty breath of peril seeping around the closed door.

"That sounds pretty drastic." He couldn't help shivering. "Who would want to murder me?"

"One man who might is John Gellian."

He repeated that name: Its sound was strange, and he tried again to deny the possibility of danger. He had injured nobody. His research goals had been unselfish. He had nothing anyone could want desperately enough to kill him for it.

"I can't talk long," the girl was saying. She gave him an address on Fortieth. "Will you be here at eleven?"

"But I can't be in any real trouble," he insisted. "Unless . . . Is it because of my research?"

Like his father, he had been looking for a way to reach and change the genes, to reshape the traits of inheritance they carried. That secret of creation might have been enough to surround him with greedy enemies—but he had failed to find it. He had been ready to give up the research, when he found

the old letters in his father's desk.

Letters from Charles Kendrew—written in the 1930's by that pioneer geneticist, about his daring plans for the great new science he called genetic engineering. Letters from J. D. Messenger, dated many years later, promising funds to carry on Kendrew's unfinished work.

Those letters were in Dane's scuffed brief case now. They had brought him to New York. They contained exciting evidence that a workable process for creating useful genetic mutations had already been discovered, probably by Kendrew himself, and that Messenger had made a fortune from it.

That evidence was what he meant to talk to the financier about. He expected an explosive interview. Any process for making directed mutations could be more important to mankind than the methods of setting off atomic fission. If Messenger had anything to hide, the letters might become a dangerous possession after he had been confronted with them.

But Messenger hadn't seen them yet. Neither had anybody else. Whatever his motives, he had given nearly two million dollars in all to the laboratory. That entitled him, Dane felt, to the benefit of a considerable doubt.

All Dane wanted was another chance to realize Kendrew's magnificent dream. If Messenger was already exploiting some crude mutation process, as the letters suggested, he wanted to learn it, perfect it, and see it applied as Kendrew had intended—to benefit mankind and not a corporation.

"I've been doing some genetics research," he explained to the girl on the telephone. "It might have been important, but it didn't pan out. If anybody thinks I discovered anything worth stealing—"

About the Author of This Novel

IF YOU dig into the dusty files of the old Gernsback magazines you will find the name of Jack Williamson and the sketch of a callow youth barely in his teens adorning the top of story after story. Jack began early and stayed long; he is one of the real old timers in science fiction writing. Unlike some others who could not grow with it, he has not fallen by the wayside as the craft grew out of its swaddling clothes. His modern work bears little resemblance to the early experiments in this still fluid medium.

A laconic, dry-humored westerner, Jack Williamson lives and works in New Mexico except for a hitch with the Army during World War II which took him to New Guinea and set the stage for DRAGON'S ISLAND.

—The Editor

"No, Dane, it isn't that," she broke in quickly. "But your predicament is truly desperate. Look out for Gellian. And we'll be expecting you at eleven."

"Wait!" he whispered. "Can't you tell me—"

SHE HAD HUNG up. He replaced his own receiver and reached absently for his handkerchief to wipe the sweat from his clammy palms. He had failed to learn anything about the Sanderson Service, but he knew he would be there at eleven, hoping to escape the cold pall of danger around him.

Her warning had convinced him that his disquieting sensations were due to some real cause outside himself, but it

seemed to him now, as he turned from the telephone, that they were already fading. He realized uncomfortably that the net result of that glare and reek and taste of menace had been to keep him here long enough to receive her call.

Until he had more data, however, the nature of that danger-sense seemed likely to remain mysterious. He gulped a glass of water to ease the dryness in his throat, and then unlocked his brief case, suddenly afraid the contents would be gone, with all his clues to that secret science.

He found them safe—the time-yellowed letters in the neat hand printing of Charles Kendrew, and the notes from Messenger typed on the expensive letterheads of Cadmus Corporation, and the penciled drafts or the carbon copies of a few of his father's replies.

He locked the case gratefully, and took it with him when he started out again. He met no shock of new alarm, and that pitiless bloom of danger had dimmed to a haunting memory by the time he reached the lobby. He called the office number on Messenger's letterhead from a public telephone booth.

Mr. Messenger wasn't in, a sleek voice purred. Mr. Messenger seldom came in before three in the afternoon, but Dane could leave his name.

He left his name, and said he would be waiting to see Mr. Messenger at three.

It was still nearly two hours before he would be expected at the Sanderson Service. Hoping to find some illuminating fact about that firm or Messenger's company or even about somebody named John Gellian, he bought an armful of newspapers at the stand in the lobby and started back to read them in the dubious sanctuary of his room.

"Excuse me—aren't you Dr. Belfast?"

The inquiry was softly spoken behind him, as he left the newsstand. Somehow, it awoke a momentary echo of that disconcerting danger-sense. He spun apprehensively, and saw a tall man hurrying after him.

"I'm Belfast," he admitted huskily. "I suppose you are John Gellian?"

"Of the Gellian Agency." The stranger gave him a tight little smile. "May I have a moment of your time?"

II

DANE studied the stranger sharply, and failed to find the implacable enemy that Nan Sanderson's call and his own shock of danger had led him to expect. John Gellian was a rawboned, dark-skinned man of about thirty-five, vigorous and muscular but slightly stooped, as if from overwork. Something about him was puzzling.

There was a veiled desperation beneath the gravely courteous restraint of his manner. He looked grimly determined, yet thoroughly afraid. Waiting anxiously to find out what he wanted, Dane had time to see the haggard brightness of his eyes and the bad color of his skin and the lines of pain cut deep around his mouth.

They reached a group of chairs in an empty corner, but Gellian made no move to sit. He swung abruptly to face Dane, his hollowed eyes unexpectedly sharp.

"I wasn't expecting you to know me." His voice was still oddly soft. "Do you mind saying how you knew my name?"

Dane said warily, "I might ask the same question."

"We're a private detective agency." Gellian smiled. "We have been investigating you, with a view to offering you a place on our staff. When our operatives reported that you were in town, I decided to talk it over with you."

Somewhat astonished, Dane shook his head. "I'm afraid you have the wrong man, he said. "I'm not a criminologist."

"What we need is an expert geneticist," Gellian answered quietly. "I understand that you are free, since the Kendrew Memorial Laboratory went out of existence—and we're able to pay whatever you want."

"Thanks," Dane said. "Thanks, but really I'm not interested."

"You will be," Gellian promised. "When you know what we're doing. Because we aren't the usual sort of agency. We don't run down missing husbands or people who fail to pay their bills. We're fighting a war—"

Gellian checked himself sharply to glance around the lobby as if afraid of being overheard.

"The job will interest you." His voice sank cautiously. "But, before I tell you any more about it, I'd like to know something about your work at the Kendrew laboratory."

"I'm not looking for a job," Dane insisted. "But there's no secret about our research there. We were studying mutations—the sudden changes in the genes that give the offspring new traits, not inherited from either parent."

Gellian nodded impatiently. "But what was the purpose of your work?"

"When my father set up the laboratory, he was hoping to find a method of directing mutation—a process for creating new varieties and species at will, without waiting on the random process of natural variation the way plant and animal breeders have always done. We spent twelve years and two million dollars on the project, and finally gave it up."

"I know, I know." Gellian shrugged nervously. "Our people on the West Coast reported your failure." His eyes narrowed keenly. "What they didn't report is where you got the two million."

"My father's secret." Dane felt his fingers tighten on the handle of the brief case, as he thought of the letters from Messenger inside. "The gifts were anonymous," he went on quickly, hoping Gellian hadn't noticed his reaction. "We promised not to reveal their source."

"Why was your laboratory named for Charles Kendrew?"

DANE answered soberly, "Kendrew was an old friend of my father's. A gifted geneticist, born before his time. Forty years ago, he began trying what we just failed to do. But a family tragedy broke up his life. He abandoned his work and dropped out of sight, back in 1939, years before I was born. My father was hoping to carry on from where he quit—"

"But he didn't quit!" A hushed violence quivered in Gellian's voice. "He never abandoned his work. He disappeared deliberately, to carry on his unholy experiments in secret."

"You're mistaken," Dane said sharply. "I've seen letters Kendrew wrote about his work, and it wasn't unholy. I know he meant nothing but good—"

"I don't know his intentions," Gellian cut in, grimly. "But I've seen the results."

Dane's clutch on the brief case stiffened. Those letters held tantalizing hints of Kendrew's success, but he had found no actual proof.

"What results?" he whispered eagerly.

"Mutants!" Gellian's deep-sunk eyes glittered, but his quiet voice seemed sane enough. "Superhuman monsters! Hiding among mankind, and waiting to overwhelm us."

"Huh!" Dane stepped back uneasily, with that pall of sensed peril again around him. "You don't mean—mutant men?"

"They aren't men! They're a new species. Not-men, we call them. They were bred from human beings, by Kendrew's wicked science."

Dane stood hunched apprehensively. His nostrils had caught a sharper scent of danger, and its bitter taste was on his tongue again.

"I told you we're at war," Gellian went on bleakly. "Our agency is a little group of loyal, determined men, organized to fight Kendrew's creatures for survival—the same way I suppose the last desperate Neanderthalers fought our own mutant Cro-Magnon forebears, a hundred thousand years ago. Only, we know the danger. We're getting a faster start than the Neanderthalers did. And in spite of all the gifts and powers Kendrew gave his monsters, we

intend to win."

"They can't exist," Dane muttered huskily.

But couldn't they? He had the letters in his brief case, and he knew that human mutants were no more impossible than the mutant plants Messenger's company was growing in New Guinea.

"Wait till you meet them," Gellian challenged him. "They're so clever that it's hard to see the difference, but you'll feel it then—like ice in the marrow of your bones."

"I've been feeling—something." Dane couldn't help glancing behind him, as uneasily as Gellian had done. Was that what he had sensed—the veiled enmity of monstrous mutant minds, striving with unknown powers to overwhelm humanity?

"Yes?" Gellian whispered quickly. "Feeling what?"

"Danger." He shook his head uncomfortably. "Ever since I opened the door of my room this morning. I can't understand it, because I've no reason to be afraid of anybody."

"But you do. You were in danger from the moment we decided to take you into the agency—those *things* seem to have an uncanny knowledge of our plans against them." Gellian stood silent for a moment, swaying on his feet as if weak from fatigue or perhaps from the illness visible in him. Then he straightened, with a stubborn effort.

"Let's step over to the office, if you can spare a moment." His voice was mild again; self-control had returned. "If you still have any doubts about our proposition, I can show you all the proof you want."

III

THE Gellian Agency occupied the seventh floor of a shabbily respectable old building near Madison Square. The receptionist was a slim, shy-faced Negro girl, whose limpid eyes seemed to light with devotion when she spoke to Gellian. The operator at the switchboard behind her was a dazzling Nordic blonde, and the trim brunette busy at the teletype machines beyond was Chinese.

"Yes, we come from every race," Gellian commented softly. "From every human race. Our old racial quarrels have come to seem pretty stupid, now that we're fighting side by side against these things of Kendrew's."

He took Dane back into a comfortable private office. A huge map of the world covered most of one wall. Dozens of black pins had been stuck into it, and a scarlet cord was wound among them, ending upon a black-inked question mark. The pins were scattered, as if at random, across the inhabited areas of five continents.

In a dim corner was a small, dark-leaved evergreen set in a common red flower pot. The pot had been weighted with pieces of dark rock and rusty scrap metal. A few bits of dusty tinsel still hung from the branches, and among them was a toy.

A rocket ship. He wondered for a moment why it hung neglected here, so long after Christmas. The tiny ship was a thing to delight any child, with its bright sheen and the fine workmanship of airlock and landing gear and bell-flared exhausts. He was reaching to touch it, when Gellian strode to the map, gesturing at the red cord wound across the continents.

"Each pin marks the birthplace of a proven mutant," he said. The string joins them, in order of occurrence. The first was Kendrew's own child, born in Albuquerque thirty-four years ago. The latest we've found is an infant prodigy born eight years ago in Australia."

"Is Kendrew really alive?" Dane turned hopefully from the riddle of the tiny rocket ship. "I mean—how do you link him with those later births?"

"We don't know how the mutants are made." The gaunt man spoke deliberately. "But it seems logical to assume that the man who made them was near by when they were conceived." He ges-

tured sternly at the map. "The maker must have been in Acapulco in 1940, and in Rio de Janeiro two years later, and in Manila in 1945. Kendrew followed that same trail, making each move at precisely the right date—so far as we can trace him."

"Pretty flimsy evidence," Dane objected. "There must have been thousands of travelers who went the same way."

"But very few geneticists," Gellian said. "None known to have been tinkering with the genes. We eliminated many suspects before we came across Kendrew—he doesn't seem to have published any work, and he was never well known. But I'm certain he's the mutant maker."

DANE BELFAST

DANE glanced at the map, with a doubtful frown.

"If that's your best evidence, how do you know there is a maker?" he demanded. "Mightn't it be that you're investigating cases of natural mutation?"

"Mutations in nature are usually slight," Gellian answered quickly. "And usually bad. Nature can't create a successful new species with one tremendous step, the way these not-men were made. Natural evolution requires thousands of generations, to accumulate the tiny accidental changes that happen to be useful, and to eliminate those that don't."

Dane nodded reluctantly.

"That's true," he admitted. "If these mutants are different enough from men to be classified as a new species, that would show manipulation of the genes by some intelligence."

"By Charles Kendrew's!"

"Maybe." Dane stepped back watchfully; he had begun to see that this meeting might have awkward consequences. "But you haven't shown me anything to prove that Kendrew made these mutants—or even anything to show that they exist. If you've any real evidence, let's see it."

"There's what I used to show." Gellian gestured at a locked steel cabinet. "Such objects as a book of intellectual poems, written in Braille by a blind child. A symphony—a weird, metallic, dissonant sort of thing, hard to perform and painful to bear——composed by a boy of six. The notebooks of another infant prodigy, kept in cipher—the only section we managed to read is a criticism of the quantum theory."

"Are such things alarming?"

"They do seem harmless," Gellian agreed quietly. "Harmless as the first human footprints must have seemed to creatures still walking on all fours."

Dane stared at him. "Have you declared war on a few gifted children, just because they seem a little too precocious?"

"It's true that most of the things we fight are young. Their youth is all that gives us any chance of winning." His stern face tightened. "We can't afford mercy, when even a mutant baby carries the seed of our destruction." His haggard eyes looked hard at Dane. "Can't you see that?"

Dane straightened defiantly. Whatever the trouble ahead, he meant to take

no part in any war on children, whether mutant or human.

"No," he said. "Nothing you show me could make me see that."

Gellian's stare seemed hawklike for an instant, but then his frosty smile came back.

"You're human, and you want to be humane." He nodded disarmingly, his voice soft again. "Most of us did, in the beginning. But war is not humane. Don't make up your mind before you've seen the evidence."

"Let's see it," Dane said. "But it will have to be good."

The haggard man swung to the cabinet.

"Here's an item that always enlists the technically minded. It's a report written by a stool pigeon for the warden at Alcatraz. It describes the plans of another convict to blow up the prison with a lithium hydride bomb. The convincing technical point is that the atomic explosion was to be triggered with radium from the dial of a wrist watch."

"Not very convincing," Dane objected. "It takes a fission bomb, plus a lot of secret equipment, to set off any sort of fission reaction."

"Radium atoms fission," Gellian said gently. "In this case, the evidence shows that they set off a fusion bomb."

Dane stared skeptically. "When I left San Francisco yesterday, Alcatraz was still sitting in the bay."

"But you probably heard about the explosion and fire there last year."

"We felt the shock, out at the lab." He shook his head. "It must have been quite a blast—but a real H-bomb would have burned out the whole bay area."

"We had the facts hushed up, hoping to keep other not-men from repeating that experiment," Gellian said quietly. "But that fire was actually caused by a limited fusion reaction, set off in a few grams of lithium hydride by some process that the AEC hasn't yet discovered. The prisoner died in the blast, but the evidence is adequate. Besides the stool pigeon's testimony, there's the fact that the whole cell block was contaminated with radioisotopes—so strongly that the debris had to be dumped at sea."

"A homemade H-bomb!" Dane stared at the gaunt man, appalled. "If such a secret got out—"

"Compared to the secrets of genetic engineering, it would be pretty harmless," Gellian cut in grimly. "But it didn't get out. The explosion obliterated every trace of the gadget itself, and the stool pigeon's description is pretty sketchy. That shows you, though, what Kendrew's creatures can do—even the imperfect mutations."

HE MOVED as if to leave the cabinet, but swung back with a troubled frown.

"There's another item that's even more disturbing. A letter, written before the last war by a patient in a state mental hospital. Addressed to the president. It's a protest against his diplomatic blunders—and it describes the results to come, with the dates and the places of all our first terrible defeats and disasters.

"At the time, of course, it looked like just one more crank letter. The investigators found that the writer was a girl in her early teens, confined as a hopeless manic-depressive case, and the letter was simply filed away. By the time it came into our hands—after all those dreadful events had confirmed her predictions—she had already hanged herself."

His sick eyes lifted.

"Almost frightening, don't you think?"

"Not to me," Dane protested. "Ordinary human beings seem to have such glimpses of the future now and then. My own mother did."

"I'm afraid," Gellian said softly. "Though not so much because of the ingenious convict and the psychopathic seer—I think they were flawed creations. Slips of the maker's hand."

The colorless cast of danger lay cold

on Gellian's fleshless face, and Dane thought he shuddered.

"The things that frighten me are those precocious poems, and that uncanny music, and that notebook in cipher," he went on huskily. "Because they show the terrible abilities of the true not-men. The prisoner and the seer were unfit—they didn't even live to meet our agents. The fitter mutants have a greater capacity for survival." His sunken face grew hard again. "Greater than our own, if we let them grow up!"

Dane straightened impatiently. "You still haven't shown me any sufficient reason for hunting down bright children."

"But here it is." Gellian swung abruptly from the cabinet, toward the potted evergreen Dane had seen. "Our newest exhibit. As innocent, at first glance, as that blind child's poetry. Just a child's toy, hanging on a Christmas tree. But it has never failed to convince anybody."

Dane followed him to the dusty little tree.

"What's so odd about it?".

"Plenty." Gellian's voice sank dramatically. "The oddities are cunningly disguised, as you might expect—it was last Christmas day that we found the thing, in a raid on a Park Avenue apartment where we had hoped to trap a mutant girl. She escaped, as the more competent and dangerous ones generally do. But we did get this plant."

"I don't see anything—"

"Feel the leaves."

DANE reached to touch the needles, and pricked his finger on a point sharp as glass. The entire plant seemed curiously heavy and hard.

"Metal," Gellian said softly. "The roots are using up that scrap and ore in the pot. When we sawed off a branch for analysis—and ruined a good hacksaw blade—the report showed forty percent iron. And a dozen other metals, with even a trace of uranium."

His feverish eyes peered at Dane.

"Would you believe that?"

Dane had to catch his breath, but he nodded slowly.

"I do," he whispered. "Metals are essential, after all, to any sort of life. The iron in this plant is no more remarkable, I suppose, than the iron carrying oxygen in our own red blood cells."

Gellian was smiling bleakly.

"Then you find it convincing?"

"Exciting!" Dane bent over it eagerly. "A remarkable mutation. Real proof, I suppose, that somebody can manipulate the genes. I'd like to look at it, inside a good laboratory." He turned back to Gellian. "But I don't see anything to make it so alarming."

"Then look at this." Gellian reached to touch the bright hull of that toy rocket, his thin smile fading. "It *grew* there—inside a sort of shell we were able to chisel off." His fearful eyes came back to Dane. "What do you think of that?"

Dane stooped to feel the toy. The metal was heavy and cold in his trembling fingers. Fragments of a dark, thick husk still clung to it, around the hard metal stem which attached it to the tree.

"A wonderful thing!" He straightened from it reluctantly. "Though, granting that somebody can rebuild genes, I suppose such a toy as this would be a good deal simpler to make than a human being—or a superhuman mutant."

"I think it was planned to be more than a toy." Gellian's voice had a tremor of unease. "It was still growing, until we cut away that husk. Our Geiger counters show that uranium is being concentrated inside the hull, possibly for fuel."

"You don't mean—" Dane paused to stare at the tiny ship, breath-taken.

"I think it was meant to grow into a real space ship," Gellian peered at it apprehensively. "The not-men are already uneasy, I should imagine, under our attacks. I think they're looking for a fortress on some other planet,

beyond our reach."

"These mutants—" Dane turned at last from the metallic plant, frowning over that more disturbing puzzle. "How do you identify them?"

"That's a problem I hope you can help us solve," Gellian said. "A difficult thing, because the mutants are so cleverly shaped to hide among men. They're somewhat tougher and quicker and stronger than we are, and apparently immune to most diseases, but the older ones are already cunning enough to conceal such physical differences, as well as their stranger mental endowments."

"And—the mental differences?"

"High intelligence," the gaunt man said. "An average I. Q. probably twice ours. A remarkable acuity of the senses—from the images she used in her poems, that blind child must have been able to smell the red color of a rose, and to hear the molecular vibration of heat. But the gift that makes them so dangerous, and so difficult to trap, is ESP."

"Extrasensory perception! Are you certain?"

GELLIAN nodded. "We haven't had any not-men in the laboratory. Not alive. We don't know the extent or the the limits of their psychological capacities. But nothing else could account for that girl's escapes from all our traps. Besides evading all our efforts to kill or capture her, she has been able to warn and hide quite a number of suspected children before we could take them."

"Is that the worst thing she has done?" Dane inquired. "Rescuing children doesn't seem so reprehensible—"

"She's deadly!" Gellian stiffened angrily. "She is armed with weapons more dangerous than that convict's H-bomb—because they're more subtle. Several of our best operatives have disappeared on her trail. By sheer good luck, we found what she had done to the last one."

Dane stood listening uneasily.

"The chief investigator for our Canberra office," Gellian went on grimly. "An able man, trained and loyal, armed as well as we could arm him. He went out alone, two months ago, to check a newspaper story about a gifted eight-year-old. He didn't come back.

"Investigating a possible mutant takes time and caution, and he had been gone three days before the branch manager got alarmed enough to look for him. The manager couldn't find him, or the mutant child, or any other clue. It's just an accident that one of our operatives on another case recognized him last week, washing dishes in a waterfront joint up in Darwin."

"Then this girl didn't kill him?"

"Not physically." Gellian seemed to shiver again. "But his mind had been destroyed. Memory wiped out. He was using a different name, and apparently he was quite content with his dish-washing job. He recalled nothing of his work with the agency—didn't even know the old friend who found him."

"Amnesia?"

"Not any common kind." Gellian shook his head. "Our medical experts say that he has Craven's disease—a rare type of encephalitis, first reported a dozen years ago by a mission doctor in New Guinea. A brain infection that destroys the memory—permanently. All the evidence shows that he had been deliberately infected with the virus—probably by this mutant girl."

Dane nodded uncomfortably. The chill of danger hung cold in the room, and he wondered for an instant if what his senses had detected could be the working of some other secret weapon, strange as that virus.

"That's the sort of thing we're up against," Gellian went on. "Such biological warfare could destroy us before we know we've been attacked, yet it's perfectly safe for the not-men, because of their natural immunity to disease. You can see why we need you."

"I'm not sure." Dane shook his head. "It looks to me as if the mutants used that virus only in self-defense—"

"A hellish weapon!" Gellian broke in.

"But we could learn to cope with weapons. What worries me isn't any weapon, or even the terrible cunning of the not-men, but their psychological gifts. While I suppose some human beings do have some feeble extrasensory perceptions, those mutant psi capacities are as strange and dangerous to us as the new mutation of human reason must have been, long ago, to the last dull near-men."

Dane shivered, awed in spite of himself.

"That's the danger." Gellian's haunted eyes looked at him. "Now will you join us?"

DANE hesitated. The bitter taste of danger burned his tongue again. Refusal was going to be awkward, yet he knew he must refuse. Sparring for time to decide what to say, he asked uneasily:

"Just what would you want me to do?"

"Help us trap the maker, first," Gellian said grimly. "That trail's too cold to be of much more use." He gestured restlessly at the wall map. "If we can catch him alive, we can make him tell us who all the not-men are, and how he mutated them. Perhaps we can destroy them, with the same science that made them." His lips tightened. "That's your job, Belfast. Are you ready to begin?"

"I don't think so. If Kendrew's discoveries have fallen into the wrong hands, I'm anxious to do something about it. But I don't see any reason for panic. Certainly, I'm not ready to start slaughtering children!"

Gellian's breath caught sharply. "You phrase it too harshly!" Anger snapped in his hard voice. "Don't forget that your father was a friend of Kendrew's . . . that might become an awkward fact, if you refuse to join us. I advise you to be here at eight tomorrow morning!"

"Or else I become another black pin on the wall?"

"I'm not threatening you. I'm simply stating an ugly situation. You're either with us or against us. This is war, and that's the way it has to be. But—I didn't want to be so blunt." Glancing soberly up at the wall map, Gellian seemed almost apologetic. "I'm quite sure you're human. I know the maker left San Francisco many years before your birth."

Dane made himself pause to look at his watch. Ten-thirty. He still had time to find out what that girl wanted, at the Sanderson Service, before he tried to see Messenger. He bent to pick up his brief case, trying not to seem too uneasy with it, and turned toward the door.

"By eight in the morning," Gellian repeated behind him. "I hope you decide to come back."

He went out to the elevator, trying not to hurry. The glare and reek and chill of enmity went with him. He clutched the brief case desperately, afraid for a moment that Gellian's agents would try to stop him. But they let him go.

IV

THE small reception room on the nineteenth floor was empty when he entered, yet it seemed a sanctuary. Dane Belfast escaped that haunting danger-sense at the door, as if he had come somehow into a safe refuge. He was looking at the neat glass desk and the chrome-and-plastic chairs, trying to surmise the nature of the Sanderson Service, when a tall girl walked out of the room beyond.

"Dane!" She looked at him with a curiously anxious intentness, and then smiled approvingly. "I'm Nan Sanderson."

He smiled back, at the friendly light in her eyes. He liked the clean planes of her tan face and the smooth upsweep of her red-brown hair and the trim simplicity of her gray business suit, but those surface things couldn't explain the way she made him feel.

Somehow, she made a tremendous sense of relieved security well up in-

side him. That surge of feeling took his breath and closed his throat, so that for a moment he couldn't speak.

"Well?" she was saying. "Aren't you Dr. Belfast?"

"Dane Belfast." Gulping at the lump in his throat, he yielded to his impulse to explain, because her serene blue eyes seemed so understanding. "I didn't mean to stare, but you just gave me the oddest feeling"

"Yes?" She waited, interested.

"I don't quite know what's wrong with me today." He looked at her hopefully. "Since just before you called, I've had the queerest feelings. Of danger. I can't be sure it's anything real, yet the sensations are so vivid they frighten me. I seem to see danger, like dark fire, and feel it, like a cold wind—if you can imagine that. It somehow comes and goes, but it followed me all the way here. But suddenly, when I saw you, I felt—well, safe."

He had paused, afraid of what she might think, but she was nodding soberly.

"The danger's real enough," she said quietly. "But we'll try to make you safe."

"What sort of danger?" He couldn't help glancing back toward the empty corridor outside. "And how are you going to make me safe?"

She shook her head. "Before I can tell you anything, you must establish your right to our service."

"How do I do that?"

"You answer questions, and you pass a test." She turned to the door behind her. "Come on inside."

He followed eagerly, lifted by a curious confidence that he could answer any question, and pass every test. The tastefully plain room beyond might have been the office of a successful psychoanalyst, but nothing about it told him the object of the Sanderson Service. The girl beckoned him toward a chair and turned to take a wide blue card from a filing cabinet.

"First we must check your record." She studied the card thoughtfully. "Dane Belfast. Race: white. Birthplace: San Francisco. Father: Dr. Philip Belfast, surgeon and bio-chemist. Mother: Tanya de Jong Belfast." Her liquid eyes lifted. "Is all that correct?"

"All—almost. Except for the race. My mother was Eurasian. A quarter Chinese. An eighth each Javenese and Filipino. The rest was white, Russian and Colonial Dutch.

"That's the way we have it." When he dared look up, she was calmly checking something on the card. "Now, your university records—"

"Doesn't that matter?" He couldn't help his hoarse interruption. "That Eurasian blood?"

"Not to us." Her blue eyes were innocently wide. "No racial strain is really pure, anyhow. I'm an eighth Cherokee, myself." Smiling, her face was a warm golden brown. "Do you mind that?"

He could only shake his head.

"Any racial stock can contribute very useful genes." She was studying the card again. "But we're interested now in qualifications of an entirely different sort."

SHE didn't say where she had found the information, but the card listed his biology degrees from Stanford, and his doctorate in biochemistry from Caltech, and even his two years as research director at the Kendrew Memorial. She asked about the common diseases of childhood, and seemed pleased when he said he had escaped them.

"Now come with me," she said, and he followed her back into a small laboratory, where she took his blood pressure and deftly stabbed his finger for a blood specimen. "All this is just preliminary. The physical data is no more important than your racial background, really. The essential tests are mental."

He almost gasped. That curious sense of sanctuary had swept away his first faint notion that she might be one of the mutants Gellian hunted, but this brought that suspicion back. Recover-

ing from his involuntary start, he studied her searchingly.

Busy, to his relief, with the microscope, her fine face intent and the cold north light turned warm on her hair, she looked entirely and enchantingly human. But all the maker's creatures, in Gellian's disturbing theory, had been cunningly shaped to hide among men.

That flashing suspicion made the nature of her business seem suddenly clear. She must be looking for her kinsmen, scattered along the maker's trail, to warn and aid them against Gellian's exterminators. The Sanderson Service, it struck him, must exist to serve not-men only. And these tests were designed to find them!

"Well?" He saw her turning from the microscope, and tried to cover his awed wonder with that casual query. "How am I doing?"

"Well enough." Nodding approvingly, she brought two sharpened pencils to the little table where she had seated him. "Now we come to the psychological tests."

Psychology was one of the biological sciences, and he knew all the standard tests. These were unfamiliar, however, and the most difficult he had seen. For the next hour, while the girl held a stop watch and marked his papers, he sweated through increasingly intricate riddles.

"Do I have to be a genius?" he finally demanded.

"It wouldn't hurt your chances." Smiling slightly, she glanced at his scores on the card. "But you have qualified for the final test. I'm going to shuffle these, and deal them out of your sight." She showed him a thin deck of cards, printed with simple geometric figures. "I want you to call them as they fall."

Trying too hard to seem at ease, he heard the pencil point snap beneath his tightened fingers. For he knew the cards; the standard ESP deck, devised years ago for the parapsychology research at Duke University. Extrasensory perception, Gellian had said, was the mark of the mutants.

"I can't," he whispered. "I'm not psychic."

Investigating that new frontier of the widening sciences of life, he had sometimes found challenging signs of a real psi capacity—an inexplicable reach of the mind beyond the range of any known senses or physical faculties—but always in other subjects. Never in himself.

"Please!" The anxiety in his own voice surprised him. "Can't we skip this?"

"This is the one you have to pass." But her warm eyes gave him a grave encouragement. "I think you will. This feeling of danger you mention—I think that's an actual perception, of a very actual peril."

He nodded, reluctantly. That cold dry glow of evil over everything outside this puzzling haven must be evidence of—something. He straightened in the chair, waiting nervously for her to go ahead.

"Ready?" She sat down behind the screen, where he couldn't see her. "Here's the first card, face down on the table. Just take your time, and try to tell me what it is."

HE TRIED hard enough, surely, but could only guess, desperately: "Is it—a star?"

"I don't know, until we finish the run. Now just relax, and take your time, and tell me what you see. Ready?"

"It's—probably a cross?"

She dealt again, and he kept on guessing wildly. He couldn't stop the anxious sweat that felt cold on his forehead and clammy on his hands.

"Why take it so hard?" She rose when the run was finished, shaking her head in reproof at his breathless tensity. "Why don't you smoke, while I check your score?"

He was a light smoker, because he had worked so much in sterile laboratories where nicotine was contraband.

but he found a cigarette and pulled on it nervously until he heard her shuffling the cards again.

"How'd I do?" he asked huskily.

"Well enough." But he caught the disappointment in her voice. "Let's try another run."

He tried again, but still he felt no truth in his desperate guesses. And he saw the trouble on her face when she rose, her faint smile forced and foreboding.

"I'm terribly sorry, Dr. Belfast." He felt the chill of a new formality in her voice. "I was sure you'd qualify, and I can't understand your failure—unless your psi capacity has been disturbed by some emotional shock." Her blue eyes turned piercing. "Have you seen the man I mentioned?" she asked sharply. "John Gellhan?"

Meeting her probing stare, watching for her reaction, Dane nodded slowly. "He found me in the lobby of my hotel an hour after you called. He took me around to his office, and told me a story, and offered me a job."

Her body seemed to freeze. Her wary eyes searched him again as she demanded: "Did you take it?"

"Not yet." Curiously relieved to discover that her mutant perception didn't tell her everything—if she were a mutant—Dane relaxed a little. "What he told me was too much to deal with, all at once. I'm thinking it over, till eight in the morning."

"He told you I'm something strange?" she breathed faintly. "Something—monstrous?"

"He talked about genetic mutations," Dane admitted uncomfortably. "A strange story. I don't quite know what to think—"

"Don't believe him!" The ice in her voice thawed suddenly, to a hot vehemence. "I know that horrible story, and it isn't true. That man's sick! He has those hideous delusions. They make him dangerous—to you as well as to me!"

She sat down suddenly on the edge of the little table that held the screen, as if weak with her troubled emotion. Her blue eyes were suddenly too innocent.

"No wonder you bungled the tests—if you believed Gellian's insane lies! Trust me, Dane. Just ask me anything you want to know."

"All right." He leaned a little forward. "Tell me what the Sanderson Service is—and what you do here?"

"I'm a geneticist, too," she said, after a moment. "I'm helping conduct a tremendous experiment in human genetics. The service is part of that."

"Your object?"

"To rescue the human race from civilization."

He waited, puzzled.

"We feel that modern civilization, by sheltering the unfit, has stopped the forward evolution of the individual. Perhaps even turned it backward. We're trying to replace the missing care of nature. To evolve an improved human type, by a process of intelligent artificial selection."

"Kendrew's process?" Dane whispered huskily. "Genetic engineering?"

"Kendrew?" Her blue eyes widened a bit. "No, our process isn't genetic engineering. We're using the same simple method men have always used to improve any breed. We select individuals who have desirable traits, and cause them to marry and have children." Aimlessly, her long fingers moved the penstand. "Among the genes we require," she added at last, "are those for the psi capacity."

"And you qualified?"

SHE hesitated. For a moment he thought her face had a look of lonely yearning; but then she turned quickly from him, into the merciless thin glare from outside. That washed all feeling from her face, leaving it fixed and cold.

Faintly, she said, "I qualified."

"I see."

She rose, moving toward the door.

"I'm glad you understand. Good-by, Dr. Belfast."

"Wait." He stood stubbornly where he was. "Won't you give me another chance?"

"I did intend to give you one." Her eyes came back to him. "But I can see now that you simply aren't for us. Please forgive my blunder. And go—before you're deeper in danger!"

"From Gellian?"

"From all unthinking people, outside our experiment." Urgency lifted her voice. "From people who mistakenly feel that we're assaulting the democratic philosophy that all men are brothers."

"I see." He studied her pale anxiety. "Gellian is only a champion of the old race, jealous and resentful of the superior breed you're creating?"

"If you wish to phrase it that way." She nodded quickly. "That's the danger. The reason you must go now—and never attempt to see me again."

They bent over the huge vat

He nodded carefully, trying not to show that he had seen through her lie. But he had Her story of that vast experiment in applied human genetics had been planned cleverly enough to convince another geneticist. Given the organization, with the money and the devoted leadership to work secretly through several generations, man might be bred into superman, without the need

of any new process of genetic engineering. Even the psi capacities might be vastly increased, assuming that the genes for those were existing but recessive. But such a new creation as that harmless-seeming Christmas tree might require an impossible million generations of natural mutation and artificial selection. It hadn't been made that way, and it demolished her story entirely.

She had opened the door, waiting for him to go. Still reluctant to leave this sanctuary, before he found what made it so, he paused to look at her hopefully. All he saw was that glare from outside on her fine face, a strange cruel sheen, inexplicable as ever.

"Good-by, Dane. Better go on."

Yet still he hesitated. He felt suddenly sorry for her, because of that pathetic lie. Because it showed so clearly the limits of whatever slight psi capacity she might possess, and because it seemed such a flimsy defense against Gellian's killers and all the glaring hate outside.

"May I see you again?" he begged impulsively. "Tonight? Tomorrow? Can't we try that test again?"

"You didn't qualify." Cold beneath that reflected enmity, she had withdrawn even beyond the reach of his pity. "Your failure is final," she added flatly. "And my time limited."

So was his own. At eight in the morning, he must join her hunters, or else be hunted with her. In the few free hours left, he still had Messenger to see, and too many puzzles to solve, and that hard choice to make. He walked out stiffly, driven by that overwhelming urgency, and heard her snap the lock behind him.

V

HE FOUND a cab at the corner. Sitting uneasily straight as it crawled downtown toward Messenger's address, he tried to decide what to do. One thing was certain: he couldn't turn his back now on Kendrew's great dream, after following it all his life. . . .

Dane's father had been Kendrew's research assistant back in 1925, when there were no electron microscopes or radioisotopes to explore the living molecules Kendrew theorized about. Experiment after experiment had failed, and after several years Dr. Belfast had opened his practise as a surgeon, leaving Kendrew to continue the experiments—

Until his disappearance.

Dane's father had saved the clippings about the tragedy in New Mexico. . . . Kendrew's wife, a parapsychologist herself, had gone berserk. She had set fire to the house, shot their baby-daughter, put three bullets into Kendrew, and then killed herself.

Firemen had dragged Kendrew out of the burning house, and he had recovered from the burns and bullet wounds. But then he had disappeared—and Dane's father had never heard from him again.

Dane stared out of the cab window at the busy streets, thinking over his conversations with Gellian and Nan Sanderson and their possible implications. He knew somehow that if Kendrew had hoped—or hoped now—to change the world, it wasn't for the worse. And he knew that Kendrew's old dream had grown into a stubborn purpose of his own—rooted, perhaps, in his father's crusading idealism and his mother's vivid Eurasian loveliness. It had occurred to him often that if his mother's blood had been all Caucasian, he might have grown up well content with the world as he found it. But his racial heritage was plain to see in the slight tilt of his eyes, the scantiness of his beard, and he'd had his share of sour encounters with race prejudice—enough of them to throw him off balance occasionally, as he had been with Nan Sanderson only a few minutes ago. Generally, though, his hide was adequately tough—another heritage, he supposed, from his parents, who had damned the torpedoes and gotten married over the objections and warnings of shocked

friends. Tanya de Jong had been a lab technician in one of Manila's bomb-scarred hospitals, and Dr. Philip Belfast an Army surgeon, worn and lonely from the long ordeal of all the war-torn island behind.

Neither of them, Dane felt, had ever been sorry about the marriage.

They had returned to San Francisco with the end of the war, and there, when Dane was ten years old, his mother had died. Later that same year Dr. Belfast had retired to open the Kendrew Memorial Laboratories and continue the genetic experiments he had forsaken so long ago. But he had been unsuccessful; the genes were too small to manipulate by any process the old surgeon could devise. In his own turn, Dane had tried just as hard. But lack of finances, now that Messenger no longer subsidized the work, made any headway impossible . . . Dane had been ready to give up the whole project. Then he found the old letters in his father's desk—the old letters from Charles Kendrew, about the great new science, genetic engineering. And a tattered carbon copy of a letter Dane's father had written Messenger, the year Tanya had died: he had examined some of the remarkable plant products which Messenger's corporation was shipping from New Guinea—surely they were from an entirely new plant species? Could they have been mutated by his old friend, Charles Kendrew?

Messenger's reply: the plants were bred by a man called Charles Potter, who had now lost his mind and was dying . . . . not much known about Potter—always evasive about his past . . . however, the company would like to set up a laboratory to finish Potter's experiments and edit his papers . . . . if interested, wire at once.

That had been the beginning of the Kendrew Memorial Laboratories.

But why had the correspondence been hidden in his father's desk? Were Messenger's donations a cynical device to bribe his father into forgetting the vanished geneticist?

Dane's hopes for an honest understanding with Messenger began to flicker. Charles Kendrew had really been the man Gelhan called the "maker"—and whom Messenger called Charles Potter—and if all the vast wealth of Messenger's CADMUS, INC. had grown from a secret exploitation of genetic engineering—

WHEN he got out at Messenger's address, all that sense of pitiless attack fell back upon him. Unnerved, he paused on the curb to look for its source.

The enormous tower, all sternly functional glass and granite, had been planed boldly in a somewhat run-down section of shops and lesser office buildings. The disturbing thing about the building was the plaque of bronze and colored glass above the entrance.

Green glass filled a golden outline of New Guinea, the shape of it a sprawling dragon, the monstrous jaws toothless and spread wide. Against it in high relief stood a bronze figure of Cadmus, the dragon-slayer of that old Greek myth, arms flung out to sow the teeth which took instant root, so the legend went, to grow into men. Beneath the dying dragon, huge golden letters spelled: CADMUS, INC.

That symbol had always seemed harmless enough before, in the company advertising and on Messenger's letterhead: a natural reference to the beast-like shape of that great island on the map, the triumphant giant standing for the corporation, sowing those vast new plantations. Now, however, it had become a disquieting hint of the maker's superhuman creations.

That hueless glare of evil shone cold on the plaque, and the bitter reek of unseen deadliness seemed stronger than the traffic fumes. Retreating again from the snarl of the street, Dane pushed through the massive glass doors.

All that unaccountable feel of crouching peril seemed to fall away as the express elevator lifted him, so that he was

almost at ease again when a blond receptionist cooed his name into an office interphone and then guided him past empty desks into a long, luxurious room beyond.

"Well, Dr. Belfast!" An enormous, ugly, weather-beaten man, J. D. Messenger came waddling laboriously around a magnificent desk made of pale New Guinea silverwood, to grasp his hand with an entirely unexpected warmth. "I've been expecting you. Sit down and have a cigar."

Dane declined the cigar, but sat down gratefully in a huge leather chair, trying to get over his instant liking for Messenger. Prepared to meet some human reflection of this cold fortress of a building and the unobtrusive power of Cadmus, he wanted to mistrust this genial reception.

He watched Messenger move with an elaborate and laborious caution back to his chair. Old and overweight and obviously ill, the financier still had a certain surprising felicity of action, and even a kind of charm. The history of an active life lived nearly to the end was written on his calmly massive face, in ancient scars and unhealthy purple blotches and sagging yellow wattles of loose skin; yet his shrewd blue eyes were smiling serenely.

"Good to see you." Already puffing, the old man paused as if the task of sitting down took all his effort. "Admired your father. Interested in your research. Deeply. Sorry I had to cut the money off."

THAT beaming cordiality made Dane feel awkward about the questions he had to ask, and he hastily reviewed his plans. Logically, Messenger ought to know both Nan Sanderson and Gellian. Milking his vast fortune from those mutant plants, he had certainly learned something about the maker's more ambitious creations. And Gellian's implacable hunt for the not-men, covering Australia, had surely also reached New Guinea. Yet Messenger's cheery innocence made him doubt that the man was involved with either of them. For an instant, he questioned even the evidence that the financier had bought or tricked his father.

"Well?" Settled now behind the desk, hands locked over his belly, Messenger seemed disarmingly patient. "If you want something, young man, let's talk about it."

"I do want something." That scarred smile had begun to reassure Dane, even about those awkward questions. "Something you promised my father, when you first endowed the laboratory." He watched uncomfortably for the big man's reaction. "If you can arrange it, I'd like to see Charles Potter's notes."

Those battered features showed no flicker of surprise.

"Sorry, but I can't arrange it." Messenger shook his head, with a ponderous bland regret. "Poor old Potter was eccentric, you know. Trusted nobody. We found all his papers destroyed, after he died."

"Died?" Dane had half expected that blow, yet he flinched. "When?"

"Let me see." Messenger scrutinized his flat blue thumbs. "Must have been last year—no, two years ago. Out in New Guinea. The old bird would never hear of coming back to civilization, not even to die."

"Did my father ever know?"

"I doubt it." Messenger shrugged, with a patient indifference. "Old Potter had squandered all he ever made, on drugs and drink and experments that failed. Alienated all his friends outside the company. Had no relatives. I don't think anybody cared—"

"My father was never alienated," Dane broke in quickly. "I know he cared, because Charles Potter—Charles Kendrew—was his oldest friend." He stared at the genial financier, searchingly. "What I don't know is why he never told me that your plant breeder was his missing friend."

"Because he wasn't, probably." Messenger's pale eyes lifted lazily. "What

gave you any such idea?"

"My father's papers. Letters to him from Kendrew. A letter of your own." Accusations would do no good, and Dane tried to soften his voice. "Didn't you think Potter was actually Kendrew when you endowed the Kendrew Memorial?"

"Your father's notion." Messenger peered idly down at his restless thumbs. "Before he knew anything about Potter. I thought he might be right, until I learned more about Kendrew. We both agreed, then, that his missing humanitarian couldn't very likely be my twisted misanthrope dying in New Guinea."

The humanitarian might have been changed into the bitter recluse by that tragedy in Albuquerque. Dane was about to suggest that when a sudden suspicion shook him. Had Messenger killed the missing geneticist?

Still gasping a little for his breath, this jovial fat man didn't look like a murderer for profit. Yet he and his associates had been the only known beneficiaries from those tremendous discoveries. Messenger's guilt could explain the generous arrangements to insure his father's silence, and this present glib insistence that his plant breeder had not been Kendrew.

"No regrets about the millions we poured into your research," the financier was wheezing. "I'm just sorry we couldn't afford to go on losing. A bad year for the company, you see."

"But we can carry on our research, without much money," Dane insisted. "Even if your expert burned all his papers, there's still a record of his process—in the genes of the plants he bred for you."

"Sorry, Belfast." Pursing fat blue lips, Messenger shook his head. "Your father used to want specimens, too; but we can't ship live plants. Company policy."

"Then I'll go to New Guinea," Dane offered—grasping eagerly at that possible escape from Gellian. "I can study them better on the spot, anyhow—"

"Impossible!" The warmth had gone from Messenger's eyes, leaving them cold and flat and somehow too small for that enormous, mottled, sagging face. "My associates wouldn't consider that."

"I don't intend to steal your secrets." Dane half rose, drawn taut with anxiety. "But I believe those plants are directed mutations—no matter who Potter was. If we knew how he made them, we could make anything! Specialized mutant viruses, for instance, to wipe out disease germs." He looked hard at Messenger's own sick face. "Would that be against your policy?"

THE OLD man's small eyes met Dane's for a moment, surprisingly keen, before they fell sleepily again to his cradled paunch. "The wealth we create benefits all the world." He caught a rasping breath. "Isn't that enough?"

"Not for me. Not if you're hiding and exploiting those wonderful discoveries Kendrew hoped to make. Not if you're guilty of—that."

Of murder, he had wanted to say. Murder of a new-born science, and its unfortunate inventor. But this shrewd old man had betrayed nothing, and such charges would be obviously unwise. Dane checked his outburst, and tried to soften his bitter voice.

"Sorry I troubled you," he muttered stiffly. "Thanks for all the help you gave my father."

Trembling, he turned to go.

"Wait!" Messenger boomed behind him. "We haven't talked about that job."

Dane came slowly back, asking blankly, "What job?"

"Didn't you come to ask for a position with the company?" Genial again, those faded little eyes peered innocently out of their deep wells of bloated flesh. "Knowing something of your circumstances, I took that for granted. How would you like a place in our public relations division?"

"I didn't suppose you wanted much publicity."

"We don't." Messenger's slow grin was almost likeable. "Half the work of a press agent is preventing bad publicity."

Dane stood thinking of that other job waiting, at the Gellhan Agency. Hoping Messenger might yet somehow rescue him from that pressing dilemma of whether to become hunter or hunted, he tried to tell himself that the cunning old tycoon looked too bluff and hearty to be entirely bad.

"People envy our success," the financier was wheezing. "They start malicious rumors, and attempt to meddle in our private affairs, and try to steal our trade secrets. Your job will be to fight such interference."

Belfast stared incredulously. "To help conceal the very facts I want to learn?"

"Put it that way if you like." Messenger nodded cheerfully. "Be here at ten in the morning, if you want to go to work. Your pay starts at three hundred a week."

Dane stiffened at that improbable figure, wondering if Messenger hoped to buy him off as, he suspected, his father had been bought.

"A lot of money," he said. "How do I earn it?"

"Relax, and I'll tell you all about it." Beaming as expansively as if Dane had already accepted, the fat man offered dark New Guinea cigars in a heavy silver humidor, and lighted one himself. "Unfortunately, occasional matters come up that are too delicate to be handled in any ordinary way." The shrewd old eyes didn't seem to see his silent protest. "I want you to join the small staff of skilled specialists we employ to care for such extraordinary cases as they come up, by whatever methods they may require."

Including—murder?

"As such a specialist," Messenger continued blandly, "you will work directly under me. You will receive your assignments from me personally, and report their accomplishment to me alone—there must be no failures."

"But I haven't taken the job."

"You will take it, when you hear about your first assignment."

DANE listened uncomfortably, certain Messenger would never tell him so much, except as a warning to forget what he already knew.

"A tricky affair." Worry erased the financier's ponderous confidence. "There's a newspaper reporter—a filthy little rat—prying into our private business with a stupid persistence and no legitimate reason. He has even been to New Guinea, trespassing on our concessions. Now he's back in New York City, ready to expose us—as he puts it. Your first job will be to gag him."

"If a man is writing the truth," Dane said flatly, "how can you gag him—honestly?"

"Your problem," Messenger murmured. "Although we can assist you with unlimited funds and a staff of clever specialists who have solved many such problems with never an incident to stain the good name of Cadmus!" The faded eyes peered sharply through gray cigar smoke. "Is that perfectly clear?"

"Perfectly," Dane said. "Even though I can't take the job."

"Better think it over." The fat man was blinking at him sleepily, and suddenly Dane felt danger like a cold liquid dripping down the back of his neck. "Come back in the morning, if you change your mind. I'll hold it open until ten."

"I'll think it over," Dane agreed. "But I've had another offer that's even harder to refuse."

"Better watch your step," Messenger warned, with an air of lazily friendly concern. "These people trying to steal our secrets don't stop at anything. Bits of accidental information about our business have cost a number of men their lives."

"Thanks." Nodding ironically, Dane turned to the door. "I'll try to be on guard."

VI

THAT snarl of unseen danger met him again when he came out into the windy street. The taste of hostility was once more a dry bitterness in his mouth, and the feel of it a cold weight at the back of his skull. He had to squint against a driving glare of black malignance.

That awareness couldn't be real—but it was. For a panicky instant, in spite of Nan Sanderson's tests, he wondered if it could be some actual perception of Messenger's specialists or Gellian's executioners or even Kendrew's inhuman creations; and he turned back suddenly, trying to catch some murderous stalker by surprise.

The people he saw were harmless to the eye: a few clerks and office girls, shrinking timidly from the raw east wind and ignoring him entirely. Yet that colorless cast of danger made all their pale faces equally gray and wary and implacably intent.

Give it up and get away, common sense was urging. But it had been too late for that, he knew, ever since Gellian spoke to him in the lobby. Perhaps ever since Nan Sanderson called. There was nowhere to go, beyond the reach of Gellian's men, or Messenger's. If the mutants were causing this danger-sense, they might be anywhere.

Anyway, even now, he didn't want to run away. The amazing art which had shaped that metallic plant was worth any possible risk. The wealth of Cadmus was merely a hint of what it could do. Here was the goal of all his life, too near and real to be abandoned now.

He was still plodding north, too aimless even to signal at the taxis passing in the rain, when his harried thoughts turned to that nameless reporter. He wanted to know what the man had discovered in New Guinea, but he could see no way to find out. He shook his head wearily . . . and then noticed a change in that pall of overhanging danger. . . .

Before, that colorless glow of something not light had seemed to burn uniformly over all the inhospitable city; but now it seemed to fade and flow, condensing into an ominous column east of him.

At the next corner, he turned uncertainly toward it. For that sudden shift was at least another hint that it came from something outside his troubled mind. If he could find its actual source, here and now, he thought he might find the key to all his riddles.

The change in that strange radiation had come as he wondered how to find that hiding man—almost as if it had been a searchlight, focused to guide him. Now he noticed that it seemed to fade and spread whenever he wondered what it was, and to gather again when his mind came back to that nameless newsman.

Dimming and returning with every shift of his thoughts, that inexplicable beacon hung over the same dilapidated block until he reached it, and then the ominous reflection of it seemed to pick out the gloomy doorway of a cheap transient hotel. Trying not to breathe the strong reek of menace seeping out of the narrow lobby, he pushed eagerly inside.

"Sorry, mister." The sad-faced red-haired youth at the desk looked up mistrustfully at his empty-handed dampness. "No vacancy here."

"I just want to see one of your guests. A newspaperman, just back from New Guinea." Anxiety caught his breath. "I don't know his name, but don't you know the one I mean?"

The clerk's sad eyes brightened at Dane's five-dollar bill.

"We do have a funny little guy up in five-eleven," he admitted. "Name of—" He paused to peer at the dog-eared register. "Name of Nicholas Venn. Sunburned, from some hot country. Typing, up in his room. Would he be your party?"

"Let me talk to him."

The clerk picked up the five, and

nodded at the ancient automatic elevator.

A TYPEWRITER stopped when Dane knocked at the locked door of 511, but he had to wait a long half minute before the door opened on a chain to a cautious slit. A tired nasal voice asked harshly who he was.

"Nobody you know," Dane said. "But who I'm *not* might interest you. I'm not a Cadmus expert. I think that gives us something in common. May I come in?"

After another unsertain pause, Nicholas Venn unchained the door. A nervous, shabby, hungry-faced little man, he secured the door again before he turned to face Belfast, with a glitter of puzzled mistrust in his narrow eyes.

"All right," he rasped uneasily. "Tell me what we have in common."

"Danger," Belfast said. "From Messenger's specialists."

And he turned to look around that musty cell of a room, which opened on a dark air shaft. Stronger than the light of the naked bulb at the ceiling, that hueless glare of peril washed the stained walls and the ramshackle dresser and the battered suitcase half under the unmade bed.

Catching an apprehensive movement behind him, he swung back to see the worn bolo on the dresser, now in easy reach of Venn's poised hand.

"Well?" Venn stood peering at him fearfully. "How do I know you really aren't a Cadmus man?"

"I'm a geneticist. I want to talk about those mutant plants in New Guinea. I've some papers—" Dane had stooped to open the brief case, but he stopped as Venn's thin, dirty-nailed hand darted for the bolo. "Just papers."

"Guess I'm jittery." Venn's bloodshot eyes narrowed again. "But how did you get here, unless Messenger put you on my trail?"

"He did, in a way." Dane decided to say nothing of that guiding column of dark fire just yet, though he still hoped to find the source of it in something here. "When he was trying to hire me."

"If you aren't working for him—why not?"

"Because I think he's exploiting a discovery stolen from a friend of my father's. A way to mutate new species. If you've really been to New Guinea, I think we can help each other."

"I've been there, all right." Venn nodded wearily. "I do need help. From a geneticist, especially." He nodded at the only chair. "Sit down, and let's talk things over."

Removing an empty milk carton and a full ash tray, Dane sat down in the chair. "What can a geneticist do?"

"Examine something I brought back." The haggard little man came limping to sit on the edge of the untidy bed.

"Something from New Guinea?" Dane had to catch his breath. "A specimen?"

"I think we ought to get acquainted, first." A weary watchfulness came back to Venn's sleepless eyes. "Let me see your papers, now."

BELFAST showed the contents of the brief case and his wallet, and spent the next half hour answering shrewdly searching queries about his scientific training and Kendrew's old dream of rebuilding the genes of life at will and his own recent meeting with Messenger.

"Okay, Belfast." He gave Dane a thin smile of approval. "You'll see why I had to be safe, when you know what I've been through."

"That specimen—may I see it now?"

"Later." Venn grinned wearily at his restless anxiety. "The thing isn't even whole. And it won't mean much until you know how I got it."

"Then let's hear about it." Sitting impatiently back to listen, Dane lighted a cigarette, hoping the tobacco might help cover that bitter scent of hostility still hanging in the room. He saw the sudden glitter of hunger in Venn's red eyes, and offered the package.

"Thanks!" Venn's soiled, broken-

nailed fingers quivered with the match. "I'm all out of tobacco."

Glancing sharply at the door, he dropped his voice again. "Couple of years ago, I began to pick up rumors about Cadmus. All their competitors had gone under. Messenger had run Cadmus up from a shoestring to the top in twenty years. He had enormous enterprises in New Guinea, but no labor problem. The few people who knew anything were getting rich by keeping quiet. It all had a funny smell, so I began digging."

"So you went to New Guinea?"

"In the end." Venn inhaled again, avidly. "You can't buy a ticket to New Guinea. Company policy. But Cadmus has made a lot of people curious. I found men ready to risk their lives to find out more. A few were after diamonds or uranium. Took months to get started, but we finally got to Manila and hired a fishing boat to smuggle us ashore on the north coast of New Guinea.

"We managed to avoid the company launches on the rivers, and the patrols that fly along the coast, but New Guinea beat us. Tried to hire native guides, but the company property is tahoo. And they're scared to death of the little-fella green-fella devil-fella."

Dane stared.

"Potter's lizards," Venn explained. "Cadmus doesn't use Kanaka labor. They use a sort of tame iguana that a man named Potter found in an unknown valley on the upper Fly. The climate doesn't hurt them, and they'll work until they drop—I guess that's why they're called 'mules'. Never saw one myself—but the Kanakas told me about them."

"I wonder if Potter really found them," Dane said slowly. "I wonder if he didn't make them?"

Venn peered at him oddly.

Dane asked, "Is that what you brought back? One of those mules?"

"I don't know what it is." The worn man shrugged. "I'd started upriver alone, in a little inflated plastic boat. Some of the men were too sick to travel, and the rest lost interest when they found a few flakes of gold." Sitting hunched on the bed, Venn shivered. "Stinking swamps alive with leeches. Flooded tributary streams full of crocodiles, and hills that are rain forests tipped on edge, and more nipa swamps beyond. I ran out of food and atabrine. Malaria hit me again. Finally I gave it up.

"I was three-quarters dead, the day I came paddling back down that tributary into the Mamberamo—too weak and groggy to know where I was or to care who saw me—and then I found the dead thing floating."

"A mutant iguana?" Belfast whispered.

"Maybe you can tell what it is." Smiling haggardly, Venn got down on his knees to pull the travel-scarred suitcase from under the bed. He unlocked it, and dug beneath soiled shirts and underwear to come up with a heavy, strong-smelling package.

He began unrolling layers of tough, transparent plastic from around something shaped unpleasantly like the body of a child. "I cut it up for wrapping."

THE THING he unwrapped was neither human nor lizard nor anything else Dane could name. The color of it was a shiny, greenish black, and the heavy, penetrating odor of it became part of that reek of danger in the room.

"It doesn't decay." An awed puzzlement slowed Venn's voice. "I was too sick the night I dragged it out of the water to use the preservatives I had brought, and next day I could see they weren't needed." He looked up sharply. "Do you know what it is?"

Kneeling beside him on the floor, carefully turning and prodding that queer, crumpled thing, Dane shook his head dazedly. The creature had been a biped, he could see, with slender three-fingered hands and a long, egg-shaped head. Its sleek, dark armor was somewhat like the chitinous exterior skeletons of insects and crustaceans, and the small

masses of dried, brittle tissue on the back resembled vestigial wings. The rest of it was incomprehensible.

"Well?" Venn whispered anxiously. "What is it?"

"Something new." Dane frowned blankly at the curiously smooth oval of its head. "Something I don't understand. No mouth, you see. No jaws. Eyes, but no external ears. No nostrils—though it must have had some respiratory arrangement to live at all. No evidence of any sort of alimentary tract, or even of reproductive organs."

He bent to peer and prod again, and finally shrugged with bafflement. "It's no iguana, certainly. No more a lizard than it is a man. The fact that it doesn't decay—and its odor—suggests an entirely different chemistry of life."

He rose at last, turning slowly back to Venn.

"The thing's exciting," he said. "It proves that somebody is creating entirely new kinds of life in New Guinea. It's enough to prove that Cadmus is using some process for directing mutation!"

"Will you help me do that?" Venn's shadowed eyes searched him anxiously. "Prove to the public what Messenger and his gang are up to?"

"I'll do anything I can." Dane nodded quickly. "Because I'm pretty well convinced they murdered my father's old friend, to get that process. I want to recover it. Kendrew intended to enrich the whole world with it, not just a few bankers!"

"Then let's decide what to do."

"You might be better off without me," Dane warned him. "I'm afraid I'd be a dangerous asset."

"Don't worry too much about Messenger's specialists." A feverish purpose glittered in Venn's weary eyes, and quivered in his rasping voice. "Because we can run those vermin to cover now. I've smashed other rackets with press campaigns—I know how to use publicity."

"So does Messenger," Dane said grimly. "And I'm going to be in trouble with another group, besides. A private detective agency, hunting mutant men supposed to have been made by this same process. I've refused to join them—and they're going to be looking for me, after eight in the morning."

"Mutant men, huh?" Venn seemed to listen again for footsteps in the hallway. "Is there no limit to what that process can make?"

"It can unlock all the latent powers of life," Dane said soberly.

VENN shrugged abruptly, as if trying to shake off his fears. "You can examine the mule again, and describe it for the scientists. I'll fix up a press release. We'll have a press conference—at seven in the morning!"

Nodding in agreement, Dane felt hope come back.

"I know how to manage that." Venn's weary voice was confident again. "I'll invite reporters and photographers enough so Messenger can't intimidate them all." He got up impatiently from his seat on the bed. "The first thing—" His haggard face turned anxious. "I hope you have some money?"

"Around a hundred dollars."

"That should do it." Venn frowned thoughtfully. "We'll need to rent a duplicating machine to run off our press release. Paper and supplies. A few dollars for tips, to get word around. Money to hire a larger room, somewhere, for our press reception."

"At my hotel," Dane suggested. "I'll call about it."

"Good. My welcome here's about worn out." The shabby man grinned wryly. "Even the room service doesn't seem to trust me for a pack of cigarettes."

"Oh." Dane saw then that he must be hungry. "Let's go somewhere to eat."

"I do need food." Venn nodded at the empty milk carton. "That was yesterday. But I'm afraid to go outside. Just bring me something when you come back—and be careful yourself, in case any-

body's already watching."

And Dane went down again to the street, which seemed more friendly now than Venn's beleagured room. The rain had stopped, and that gray glare was paler in the twilight. Facing the raw east wind, he inhaled gratefully, glad to escape that bitter reek of something more than the dead green monstrosity.

He walked three blocks, watching shop windows, without finding either business machines for rent or the laboratory equipment he needed for his own examination of the mule. Deciding to shop by telephone, he turned back, stopping at a delicatessen to buy cold meats and a loaf of bread and containers of hot coffee.

The red-haired clerk watched him suspiciously over a tattered comic magazine, as Dane carried his packages into the automatic elevator. The fifth floor seemed too silent, and its hush set that soundless alarm to throbbing again in his mind. He hurried to knock, and the door swung open from his hand.

The odor of death came out to meet him—stale and overwhelming. Holding his breath against it, he stumbled inside. The light was out, but that harsh glare of something else revealed Nicholas Venn, sprawled across the unmade bed—*beheaded.*

Fighting panic, Dane set his packages on the dresser and shut the door and snapped on the light. Merciless as that other dark illumination, the light showed him Venn's head, more than ever pinched and pale, staring from its own black pool on the sheets.

He turned quickly from it, feeling ill, to look for the brief case, which he had left on the dresser. It wasn't there. He started across the room to look for it, and stumbled against the suitcase. It lay open on the floor, Venn's dirty shirts dumped out and one of them newly soiled with wiped red smears.

The plastic-wrapped package was also gone.

He bent to search for it under the bed, but his groping fingers failed to reach the mule. What he found felt cold as death itself, and what he saw when he drew it out was Venn's long jungle-knife, red-spattered and blazing with that dark fire in his hand.

VII

SWAYING from his shock, Dane stood for dragging seconds in that gloomy room. Pity made a painful tightness in his throat; and then he began trembling with cold anger at the killers of this shabby little man, whose only offense had been his stubborn effort to learn and tell the truth about Cadmus, Inc.

A shaken impulse swung him to the telephone, to notify the hotel management and the police. His hasty fingers caught the receiver—and the touch of it rocked him with an almost physical impact of alarm. He let go the instrument, staggering back from it dazedly.

The harsh consequences of that act were suddenly as clear as if he had already endured them. For the fingerprints stamped in Venn's blood on the bolo hilt and the telephone were now his own. He shivered to a sudden icy certainty that Messenger's efficient experts had followed him here from the Cadmus building, and deliberately arranged this final disposition of the Venn case so that it would also dispose of his own.

A sense of trapped futility held him helpless for a moment. But he hadn't completed the call. Warned by that puzzling awareness, he still had time and freedom to fight. The green mule would make a powerful weapon in court, if he could somehow recover it.

Calmer now, he nerved himself to examine the body and the head. At first he saw no mark of anything except the jungle knife, but the twisted oddness of the heads' grisly grin drew him back to find a faint swollen discoloration of the upper lip, from some slight injury which must have been inflicted while Venn was still alive. It appeared to be no ordinary bruise, because tiny beads of blood had

oozed from the punctured skin. Yet he could discover no other cause for it.

Too much haste could destroy him now, as surely as the Cadmus killers could. Deliberately, he took time to wipe the telephone and the bolo hilt and the inside door knob with another of Venn's soiled shirts. He opened the door with his handkerchief, and paused again to wipe the outer knob. The automatic elevator was an endless time coming. It took him down alone.

He knew the sullen youth at the desk would soon be recalling everything about him for the police, but he decided to take the risk of leaving a stronger impression.

"I came here to buy some valuable plant specimens that Mr. Venn brought back from New Guinea," he began carefully. "He told me to come back later, because he was expecting another bid. Now he doesn't answer my knock. Has anybody left with baggage since I was here before?"

"Couple of salesmen checking in. Nobody checking out. Unless—" The clerk looked back at the twenty, hopefully. "Unless your party could be a girl?"

Belfast began to shake his head, and changed his mind. "Might be." He tried not to seem too desperately concerned. "If she left in the last hour, with baggage or a large package."

"She did."

The clerk was holding out his pale hand, but Dane hesitated. No ordinary woman would have strength and skill to decapitate a man with one slash of a knife. But the not-men, he recalled that warning of Gellian's, were quicker and stronger than men. He released the bill.

"Did she have blue eyes and reddish-brown hair?" Dane's voice was dry with strain. "Skin just faintly olive—as if she had a little Indian blood?"

"That's right," the clerk agreed.

Dane must have swayed, for he felt cold and sick inside. He found himself clutching at the desk with a sweaty hand, and drew back apprehensively, hoping the police wouldn't check for fingerprints there.

"Thanks," he whispered bleakly.

Nodding with a veiled hostility, anxious to be rid of him now, the clerk watched sharply as he plodded out to meet the leer of the streets. The sullen youth would recall him very clearly, when the police came.

WHATEVER the truth, Nan Sanderson's office seemed a logical place to look for the missing mule. Trying not to leave too plain a trail, he took one taxi back to Times Square, and another east on Forty-second Street, and walked the last two blocks south to Fortieth.

The building looked dark, but a sleepy-eyed elevator operator took him to the nineteenth floor and waited while he rapped at the door of the Sanderson Service. To his surprise, it opened instantly.

"Why, Dane!" The tall girl looked past him to meet the questioning glance of the man in the elevator. "It's all right, Kaptina," she called. "Dr. Belfast is one of our clients."

She let him in, and locked the door. He stared at her uneasily. She looked lovely, and strangely afraid.

"Why did you come back, Dane?" Her hands had risen apprehensively when she saw him, and her breathless voice held reproof. "Didn't I warn you?"

"I came back for a biological specimen." Watching her, he saw terror crawl up to drain the blood from her lips and the light from her eyes. "The body of a small greenish creature, called a mule. I think you have it here."

"Please—won't you leave me alone?" Her pale hands made a violent protesting gesture. "And get out of town, while you can!"

"Sorry." He grinned at her stiffly. "But it's much too late for that. I've talked to Messenger, you see, as well as John Gellhan. And I've just seen poor little Venn with his head off."

She nodded, shrinking from him, her eyes narrow and greenish-seeming now. She seemed to wait for his accusation,

and he made it hoarsely:

"You killed him—didn't you?"

She flinched, and seemed to catch her breath. The line of her pale lips drew harder, expressing neither admission nor denial.

"Anyhow," he added harshly, "I want that mule."

She stood for a long time motionless, her body taut.

"I have it," she admitted at last. "Back in the lab."

He moved forward quickly. "Let me see it."

Still blocking the door, she studied him with a tortured indecision dark in her eyes. "I'm sorry," she whispered at last. "I really wanted to help you get away." She moved regretfully out of his way. "Come on in, if you must see the mule."

He followed her back to the little laboratory where he had failed to qualify for the benefits of the Sanderson Service. Choking fumes brought him gasping to the sink. There he found the creature from the Mamberamo, reduced to a few dark shapeless scraps dissolving in a greenish acid froth.

"I'm sorry, Dane." Her low voice swung him back. "I didn't plan it this way—"

That was all he heard. He caught one glimpse of the weapon she had found in the moment while his back was turned: a thin metal tube. Though it looked too tiny to be dangerous, he snatched at it desperately. It clicked very softly in her golden fingers before he could reach it, stabbing out a fine jet that stung his forearm like a hot blade. That was all he knew.

VIII

SOMEBODY was shaking him. "Wake up!" It was a girl, bending over him anxiously. "Can't you wake up, now?"

She was beautiful in shimmering blue, reddish-haired and tawny-limbed, but he didn't recognize her. He didn't know this dim-lit office room. His head ached intolerably when he tried to lift it, and his right arm throbbed, and he couldn't wake up.

Later, a telephone rang near his head. Still too drowsy to move, he heard the girl's quick footsteps, and her low voice speaking.

"No, I'm still waiting," she said. "I've packed what we can take, and destroyed what might harm us. I'm ready to go, as soon as our visitor is able."

The answering voice was too faint for him to hear.

"The usual satisfactory reaction to the jet injection." The girl spoke briskly again. "He crumpled up, before he knew what hit him. Pulse still accelerated and temperature high. He's a clean page, by this time."

Dimly, he wondered what her words could mean, but he couldn't remember anything. Feeling too heavy to move, too blank even to ask who he was or what had happened to him, he kept on listening.

"Leave him behind?" Her voice lifted protestingly. "He's worth all the danger to us. And he wouldn't have a chance, if they ever found him here."

He wondered vaguely who "they" were, and why he wouldn't have a chance.

"A raid?" Her voice turned faint with fear. "At four? No, I didn't know. I'm too tired tonight to see that far ahead."

The other voice murmured in the instrument.

"But we can't just abandon him." Cool resolution steadied her tone. "We need him too much with his mind undamaged. I'm afraid to move him yet, but I think I can delay that raid."

He thought the other voice objected.

"I'm going out now, to make a diversion," the girl said firmly. "If I get away with it, I'll come back here in two hours for our new recruit. We ought to reach your place by five—if we get there at all."

She hung up the telephone. Her quick

footsteps receded. A door opened and closed, and she was gone. Wondering dimly whose that other voice had been, hs went back to aleep. . ...

What woke him was a shock of sheer alarm. It brought him to his feet, dazed and trembling.

He looked around him blankly, but he didn't recognize the desk, or the filing cahinet, or the doorway beyond. All he knew was the fact of deadly danger.

He slipped out into a dark corridor. Even in the darkness, a cold glow of something not light showed him the stair. He ran silently down flight after flight, until at last he came to a closed door at the bottom.

It let him out, into a wider hallway. He ran along it toward the gray light from the street, until once more the cold force of danger caught him. It held him flattened hack against a closed door while two men with short automatic rifles burst in from the street and ran past him to enter the stair door.

As they disappeared, he tip-toed out ths way they had come, into the street. He held himself from flight, even when the car pulled up to the curb beside him.

"Hello, there." The girl from the office was at the wheel. She leaned quickly to open the car for him. In the faint glow from the instrument panel, he could see the reddish color of her hair and the warm ivory tones of her face.

"I'm Nan Sanderson," she whispered. "I've come to help you get away."

Something made him hesitate. The glow against her face was only light, however, and hs could feel no danger around her. Somsthing made her car a sort of sanctuary. Gratefully, he got in beside her.

SHE drove rapidly at first through the rain, uneasily watching the dark streets hehind in the rear view mirror and frowning sometimes at the panel clock, whose hands stood at five.

Once however, she pulled into a narrow alley, snapped off the lights, and waited there, uneasily watching ths clock. After what seemed a long time, a police car came racing the way they had come, siren moaning and red light glaring.

She backed out of the alley when it was gone, and followed it more slowly. Rain-dimmed daylight had come by the time a toll gate stopped them, at the end of a long bridge. She paid from a small plastic bag, and she no longer watched the mirror as they went on, hut smiled at him as if her fear had all been left beyond the river.

"We've made it!" He liked the friendly warmth of ber voice. "Now I supposs you'd like to know where we're going?"

"I—I suppose." That was all he said, for words, like everything else, were curiously hard for him to recall. He didn't care, really, where they went. Ha was with her, and that colorless glare of enmity was left far hehind.

"We're going to Mr. Messenger's airport on Long Island," she said. "Don't you rememher him?"

He shook his head drowsily.

"Don't you even know your own name?"

But he didn't remember anything. He didn't even want to try, because ths effort hurt his head. All that mattered was the moment, and the girl's warm presence. He didn't want this trip with her to end anywhere.

"Fallon." Her smile heightened his dreamy content. "You're Dr. Donovan Fallon."

"Fallon?" The syllahles seemed somehow stiffly familiar, but all words cams awkwardly to him now. He repeated carefully, "Dr. Donovan Fallon."

"Now, Don Fallon, would you like to have a joh?"

"I don't know." The future was as hlank as the past. "I don't know—anything."

"You need a joh." Her face was gravely concerned. "You've been sick, and you're in serioua trouble now. You've no family. No friends. No money. But Mr. Messenger can help

you, if you're willing to work for him."

"What kind of job?" He looked down at his hands, flexing them doubtfully. "I can't remember—what I ever did."

"Don't worry about that. Part of your memory was destroyed forever by this illness—it was a rare type of virus, encephalitis. You'll have to start all over again. But your manual skills weren't harmed. And the damage to the memory is usually quite shallow, so that you can probably relearn most of what you used to know very quickly."

He nodded, gratefully, but a lingering unease made him inquire: "What's this trouble I'm in?"

"You're a geneticist." Her long blue eyes looked up at him from the road, full of troubled innocence. "You were working with this encephalitis virus, trying to identify it as a fresh mutation, when you had a laboratory accident. A young woman assistant was also infected, when you were. She died. You are accused of her murder."

"Murder?" He stared at her. "Can Mr. Messenger get me out of that?"

"He'll take you to New Guinea," she said. "We're going there to undertake some very important laboratory work for the Cadmus company. When you've recovered enough of your old knowledge and skill, Mr. Messenger wants you to be his laboratory technician."

"If it was all an accident, why must I run away?"

"You're innocent." Her calm smile reassured him. "But the authorities have circumstantial evidence enough to send you to the chair. We can't help you in court, and obviously you can't testify in your own defense."

Groping in the blankness of his mind, he found no fact to help him.

"But you'll be safe enough in New Guinea." She was still smiling, yet her sidelong glance seemed oddly anxious. "If you want to come with us?"

"Then you're going, too?"

[Turn page]

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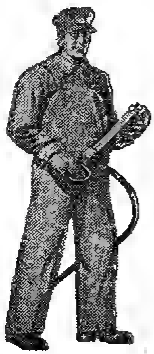

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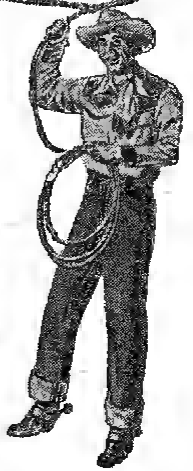

"I am." She nodded. "As Mr. Messenger's secretary."

That decided him. This new life was not two hours old, and she was still the center of it. He relaxed, content to be anywhere with her.

"I want to come," he told her. "If we can get away."

SHE turned from the highway at last, into a broad drive which curved past a long mansion as massive as a fortress.

"Mr. Messenger's place," she said. "His private plane is waiting for us." She slowed the car and stopped, as the plane emerged from the gray veil of rain ahead.

The pilot of the waiting plane waved cheerfully from the high cockpit as they started toward it, and a small brown crewman stood waiting to help them aboard, grinning an amiable welcome.

"Well, Dr Fallon." The girl touched his arm, whispering softly. "I think you're safe."

A few moments later the great craft lifted them through the pounding turbulence of the clouds. Nan Sanderson caught his arm. "Now, let's go meet Mr. Messenger."

In the sleek luxury of the lounge an enormous man sat waiting.

"Nan, I thought you'd never come!" The big man tried to rise from his chair, and sprawled helplessly. "Glad you're going, Fallon!" A genial smile swept all the scarred ugliness from his sagging face. "I know you're going to be valuable to us!"

The girl gave Dane no time to ask questions. "Medina—" she nodded at the dark steward—"will show you to your room Better get some rest, because we've a lot of work to do!"

Awkwardly he acknowledged Messenger's greeting, and a moment later was alone in his tiny cabin. Too tired to wonder at his peculiar predicament, or speculate upon the work he was expected to do, he dropped to his herth, fully clothed, and slept. . . .

He woke suddenly, sweating and shivering in his berth. For a moment he thought some shocking memory had come back as he slept, but each detail vanished as he groped for it, until only a haunting recollection of terror was left. He sat up at last, flinching from a thin needle of pain at the back of his head.

The plane was steady now, droning through stable air and the bright morning sunlight soon swept away the lingering dread of the dream. Even the tiny ache was gone from his head, by the time he had washed his face and left his room to look for breakfast.

"Good morning, Dr. Fallon." Startled by that genial hail, he found Nan Sanderson and the financier sitting over coffee cups in the lounge. Beaming at him, Messenger's fat, splotched face seemed to have a better color, and the girl was radiant.

"Feeling better, Don?" She nodded at the ports. "Now you can see you're really safe."

Turning uneasily to look out, he saw an endless rolling plain of white stratus clouds below, bright as new snow beneath the morning sun but fissured here and there with chasms floored with dark, wind-wrinkled water.

"The Pacific," she said. "We're not three hours from Hawaii. Your old troubles won't overtake you now." She rang for the steward. "Eat your breakfast, and let's get started with your re-education."

THE grinning Filipino brought a tray that made a little table beside his chair, and Dane emptied the plastic dishes with a relish that surprised him. Before he had finished, Nan Sanderson came back with an armful of heavy books. He frowned at the titles.

Microbiology Mechanisms of Mitosis. Proteins, Viruses and Genes. Evolution of Mankind And another, that somehow recalled the haunting unease of his dream: *Biochemistry of Mutation.*

"Better begin with that one," Nan

said. "It's by one of the best young men in the field, Dane Belfast." The name made him shiver inside, but he didn't know why. "I think you'll find them all easy reading, because your memory is really only half erased."

He read all day, alone, in his cabin, skimming that book and the others until his eyes blurred and his head ached again, looking for the past he had lost. He was disappointed. The briefest glance recalled the meaning of each page, like something known before, but that was all. The books opened their limited area of technical knowledge across that stubborn barrier of forgetfulness, but all his groping efforts failed to find anything beyond.

Once, when the plane landed, he looked out to see a fringe of palms beyond the taxiways, and pink stucco bungalows buried in purple bougainvilleas. He left his books uneasily, to ask where they were.

"Potter Field," the steward told him. "Near Honolulu." Through the ports on the other side of the lounge, Medina showed him huge freighters docked, and rows of long warehouses all bearing the emblem of the dragon and the giant. "And Potter Harbor."

"All this belongs to Cadmus?"

"We're an enormous enterprise." The little brown man beamed proudly. "The sun never sets on the dragon. We're all very lucky, to be with such a company."

Nodding dubiously, Dane went back to the books.

That night he slept badly, while the plane lurched and shuddered through rain squalls along the tropical front. He dreamed another dreadful dream, in which Nan Sanderson and Messenger were generous friends no longer, but sly and dangerous enemies.

He woke in the dark, his ears clicking painfully from the pressure change as the plane came down to land. A thin pain pulsed in his head again, and his mouth tasted bitter and dry. He lay sweating and trembling in his berth, almost afraid to breathe. For that nightmare had followed him out of sleep, no longer a dream. He was no longer Donovan Fallon, groping to find himself in a strange world one day old.

He was Dane Belfast.

IX

RUBBER whined against hard coral as the wheels struck a landing strip, and he stumbled to the small round window of his cabin as the plane taxied through sudden damp heat toward a lighted hangar and a waiting fuel truck. He searched the dark field, frantically.

Still sick and shuddering from the terror of that nightmare turned real, he could think only of the need to reach John Gellhan with his apologetic warning that Messenger was an ally of the not-men, and New Guinea their fortress—an impregnable citadel defended by that virus of forgetfulness, and by all the men it had robbed of their humanity, and doubtless by deadlier creations of the maker's stolen science.

And this, panic whispered, might be his last chance. Escape from those guarded concessions had proved impossible for many another man before him; and the next time these enemies of men removed his memory, their means would surely be something more primitive and permanent than that mutant virus.

He dressed quickly in the dark, and came back to measure the little porthole. It was far too small to let him out, and the glass was securely fastened. Peering out anxiously as the craft rolled to a halt and the engines died, he recoiled from another barrier.

Painted above the hangar doors was the Cadmus trademark, the dragon-shape of that enormous island and the victorious golden giant sowing dark human seed. This Pacific islet must be another company station, operated by virus-amnesiacs—he sardonically thought of them as "lotus-eaters"—too cheerily loyal to give him any aid.

It struck him then that his present status as a supposed amnesiac was an

accidental weapon in his hands, worth far more than whatever information he could take to Gellian, even if he got away.

He didn't know very much right now; but if he stayed, concealing his recovery from the amnesia—

How many not-men were gathered in New Guinea? What were their weapons and their plans? Were they fighting to dominate mankind, or only to save their own lives? The danger driving Messenger and Nan Sanderson back to New Guinea must be something more grave than Gellian's raids . . . He thought it might turn out to be a crisis in the fortunes of the not-men that could be used to end this war of races with some just peace.

The role of a happy captive of the virus would be hard to play. The difficulties and the dangers he saw waiting in New Guinea made his discarded scheme for escape seem as attractive as ever. Yet he was suddenly eager to go on, hoping to learn Charles Potter's actual fate, and even to discover the final secrets of life which had been his own goal from the beginning.

He undressed again, and turned back to his berth.

THEY were again in flight when the hot sunlight of morning woke him. Looking from his cabin window, he saw only sky and clouds and sea: the sky an infinite bright chasm of milky light in which the droning plane hung motionless; the clouds remote cumulus, luminous and topless and somehow palely unreal; the sea a dull mirror for the clouds and the sea, equally infinite and equally unreal.

He found Nan Sanderson standing in the lounge, staring somberly out at that empty sky and lonely sea.

"We'll soon be over New Guinea," she greeted him. "Shall we eat while we wait to see it?"

She rang for the steward. Before they had finished breakfast, the shape of land began emerging into that featureless bright void, first a pale shadow beneath the tall pillars of shining cloud ahead, and then a sudden green reality, edged raggedly with a thin white line of beach and broken water, and trailing reddish stains from muddy rivers far out into the clean dark sea.

"That red is like the dragon's blood." The girl nodded sadly at the long stains. "And Cadmus is dying, really—unless we can grow another crop of Potter's mules."

Dane caught his breath to inquire how Potter's mules were grown, and abruptly swallowed the question. Too easily, he could betray too much knowledge about the dead green creature Nicholas Venn had died for possessing, and too much emotion for a man without a past. Afraid to look at her, he stood watching the dark jungle silently, and he felt vastly relieved when she left him to see how Messenger was feeling.

The sick man came shuffling laboriously back with her, wheezing for his breath. His puffy flesh looked sallow and blotched and almost cadaverous, but he was able to grin a genial greeting at Belfast, and soon he was leaning ponderously to inspect the company concessions which came into view beyond the coastal range, his shrewd eyes anxious.

Those concessions made Dane almost forget his careful calm. Broad highways cut the deep rain forest, leaping canyons and rivers on long steel bridges. Tall white dams hacked blue lakes against frowning mountains. The sun glanced on railway steel. Unending rows of cultivated trees made ranks and files across vast plantations.

"The mules have done all that," the girl remarked. "With only a few amnesiacs like yourself to supervise them."

He nodded stiffly, trying hard to conceal the dismay which had followed his first amazement. This was literally an empire, created and controlled by that stolen science of genetic engineering. What could one man hope to accomplish against it?

"Look!" Messenger was muttering gloomily. "Won't you look at that?"

And Dane forgot his dismay, staring at the financier in deep bewilderment. For Messenger seemed to find no pleasure in the look of this immense green domain. Shaking his puffy head, he was making dull clucking sounds of regret, and his small eyes had filled with bitter tears.

"What's wrong?" Dane whispered.

"The mules?" the fat man gasped. "Dying."

"Where?" They were flying far too high to distinguish those small green creations of the maker. Dane was puzzled; and almost sorry for the sick man. "I can't see anything."

"Notbing." Messenger nodded sadly. "No tractors working the plantations. No trucks on the roads. No trains. No shipping on the rivers. The mules are dying—and everything has stopped."

"There isn't much about mules in those books," Dane said cautiously. "Aren't they a kind of hybrid?"

"Potter's mules are different."

"Won't I need to know something more about them?"

MESSENGER nodded, and be waited painfully, trying to cover the naked intensity of his interest with the serene cheer of those men without trouble.

"Potter's mules conquered New Guinea." The sick man nodded somberly at the jungle-choked canyons below the descending craft. "This damned island's no place for men, and there was too much work for men to do. But Potter knew how to take the genes apart and put them back together to grow whatever he wanted. He made the mules." Messenger shook his head gloomily. "He would never even tell me much about them, and I didn't know enough genetics to follow the little he did."

"That's too bad," Dane said carefully.

"Calamitous! Unless you and Miss Sanderson know enough genetics to grow another crop of mules."

"What did he mutate them from?"

"A motile alga, he called it." The fat face frowned. "I don't remember the Latin name he used, but it's a simple, one-celled plant that swims in fresh water ponds under its own power. He changed the genes to make the cells develop into obedient little bipeds, about half as tall as men. They can't talk, but they're intelligent enough for most kinds of labor. And they don't eat —that's a touch of Potter's genius."

Belfast tried to breathe again, reminding himself that to a man without memory such creatures might seem no more remarkable than the common green scum from which they had been made.

"Potter kept the chlorophyll, you see," Messenger was wheezing. "But mutated, too, to store up eighty percent of the energy of sunlight, instead of one percent. All those mules need for food is air and water and sunshine."

Dane nodded, as blankly as possible.

"I don't suppose you fully appreciate that," the financier rumbled. "But it means free labor, in an age when the human worker wants more and more for less and less. We could have taken over the world—if old Potter had made enough mules."

"But don't they breed?"

"Mules are sterile," Messenger wheezed. "That's why he picked the name. He made them that way on purpose—for the same reason he made them so short-lived and so small. Afraid they'd get out of hand."

The fat man paused to peer gloomily out at the clouds piling up toward the dark mountains westward, all their bases level as if they stood on some transparent floor, the summits billowing far up into the milky brightness of the tropic sky. Dane waited impatiently, afraid to prompt him.

"Potter made the mules to live just two years," he went on bitterly. "The last crop came out of his lab just before he died, nearly two years ago. That's why we've got to grow another."

Dane opened his clenched hands again,

and inhaled deliberately. "Those books tell you how to cause a few mutations at will," he said carefully. "But those few are all simple special cases. There's no general formula. I wouldn't know how to begin trying to breed anything like that. Unless—"

He looked up at Messenger, trying not to seem too anxious. "Unless Potter happened to leave some record of his process?"

"Unreasonable, I told you." The bulging head shook heavily. "He burned every scrap of paper in the lab."

"Then I don't see much hope—"

"Miss Sanderson knows something," the financier said. "I sent her out here to help nurse old Potter, and she finally won his trust. He tried to tell her how, toward the end—after he was already too far gone, it seems, to remember all the steps."

Had he trusted her, really? Dane looked down at the jungle again, to cover that sudden doubt. Had Potter really talked—or had she just attempted to pick the priceless secret from his mind, with some mutant but still imperfect mental perception?

"She tried a batch of mules, after he was dead," Messenger wheezed sadly. "They looked all right—until they died in the vats. But she's been studying in New York, and now she has you to help. Maybe you two can do it, together. Cadmus is ruined if you fail."

Recalling the haughty façade of the Cadmus Building in New York, Dane found it difficult to veil his astonishment.

"Everybody outside still thinks we're solid as Gibraltar," Messenger went on. "I've floated bonds and borrowed money to keep up a convincing front, but that's played out. Our own directors want to come out here to see what's wrong. I can't stall them off much longer. If we haven't got production to show them, that's the end of Cadmus."

Emotion shuddered in the shallow voice. "That's the situation, Dr. Fallon. A grave predicament for all of us—and especially for you lotus-eaters, who depend so much on the company. You understand why you must give your utmost?"

Belfast had not been able to suppress a start at the words "lotus-eaters"—his own term for the virus-amnesiacs. Now he nodded as calmly as he could. "I think so."

"Then help me get up!"

X

BELFAST saw the mules half an hour later, when the landing plane taxied to a jolting stop on a muddy airstrip at Edentown. Recent floods had slashed raw canyons in the strip and the taxiways, and the mules were repairing the damage.

Silent busy pygmies, toiling with toy spades or struggling by twos and threes to lift small stones, they came scarcely to the waist of their overseer, a tanned lotus-eater who towered above them like a golden giant. The green of their queer, slim bodies was glossy and almost black, and they worked with an unceasing haste.

"Can they fly?" he asked Nan Sanderson, following her toward a mud-splashed jeep in which another smiling, sunburned man sat waiting.

She shook her head, and he could see already that those slender, fringed appendages were too delicate for flight. An astonishing triumph of biological engineering, the mules were living protoplasm shaped for one specific purpose—to deliver free labor. Designed with all the free ingenuity that other sorts of engineers had always used in building their simpler mechanisms of dead metal, they amazed him and frightened him.

"Coming, Don?" the girl called back.

He hurried after her, uneasily. They caught up with Messenger, who was gasping painfully and mopping feebly at the sweat already shining on his bloated flesh. Dane turned to help the driver haul Messenger into the front

seat of the jeep, and then climbed in to sit with Nan on the luggage in the rear.

She had dressed for the tropic heat, her long body golden beneath blue shorts and halter, and for a moment he couldn't take his eyes from her loveliness. In spite of himself, he suddenly wanted to have her and hold her and defend her forever, even against his fellow men.

But then she looked at him. A faint smile warmed her cool blue eyes, as if she had sensed his surge of emotion. She seemed aloofly pleased—but a dark terror brushed him. If she could read his unwilling admiration, she would surely soon perceive some more dangerous thought.

The pitching of the jeep in the muddy ruts flung them apart and kept them hanging on. Afraid to say anything, he sat sweating in the damp heat, his clothing already adhesive.

Her allure was only one more weapon, he warned himself. She probably used it as deliberately as she did that mutant virus, to keep the loyalty of these men who had forgotten other women—but even that thought might be his last, if she were to pick it up.

"Look around you, Fallon." Messenger's breathless voice brought him a welcome escape. "You'll see how much we need the mules."

Relieved to turn his thoughts from the girl, he looked out at a young plantation already choked with grass and vines.

"Potter's last creation," the financier gasped laboriously. "A mutant kind of rubber tree. The latex is a thermosetting plastic, clear as glass and strong as steel. This one plantation might save Cadmus, if we had mules enough to hold the jungle back."

The only mules Dane could see, however, were a few carrying rocks and earth in tiny baskets, to fill a gully where flood water had cut the road. He was watching one small creature when it paused and staggered with its burden. Its flightless wings fluttered and collapsed. Silently, ignored by the others, it sank down in the mud.

"They die that way," the girl said. "As quietly as they live."

The battered vehicle splashed ahead and Nan's golden arm lifted toward a low structure of white concrete, which stood isolated beyond a barbed wire fence ahead.

"The mutation lab," she told Dane. "The biological engineering section, where Potter used to produce all his mutations."

Trying to veil the taut agony of his interest, he leaned to study the building where that lonely genius had made the mules, and probably that virus of forgetfulness, and possibly even Nan Sanderson herself. The massive windowless walls gave it the look of a fortress, and he was not surprised to see two brown riflemen outside.

"Notice them, Fallon!" Messenger's voice had a sudden flat vehemence. "That area's taboo—even to you lotus-eaters. Keep out. Those guards shoot to kill."

"Outsiders want our secret processes," the girl said more quietly. "Some of them are ingenius and persistent. We have to protect the company."

Dane nodded as calmly as he could, trying not to flinch when he recalled how she had protected the company from one persistent and ingenious outsider named Nicholas Venn.

"The production section." The fat man gestured heavily. "Your domain, Fallon."

JUST across the muddy ruts from the mutation lab, the production section was another long building roofed with sheet aluminum. Beyond it, a series of broad shallow concrete tanks spread fan-like down the slope toward the jungle-clotted river.

"That looks strange." Cautiously, Dane probed again for the secret of creation. "Do I know enough to run it?"

"Not yet," Messenger gasped at Nan.

"Tell him."

Dane forced himself to breathe again. Afraid the girl would see the raw violence of his anxiety, he turned to frown again at the puzzling construction of those empty tanks. For here must be the tremendous secret he had sought from the beginning.

"Potter grew each crop of mules from a single mutant cell," she began briskly. "He let it multiply in a sterile food-solution until he had as many billion germ cells as he wanted. Then he added a reagent to stop the fission, and start each cell developing into a mature mule . . . But you won't be concerned with that."

Numb with disappointment, Belfast turned with a careful show of expectation toward the building above the empty vats.

"Here's where we'll bring you the swimmers—the microscopic embryonic mules. Your job is to keep them alive. Though the grown mules are hardy enough, the swimmers are quite delicate. The last ones we made died in the tanks—killed, I think, by some blunder. With your skill, perhaps, we can grow them to maturity."

Dane looked at her doubtfully. "I'm afraid those books didn't say anything about growing swimmers."

"I'll bring you a memo on the process." Her voice was intense, her blue eyes dark and grave; her loveliness caught him so painfully that he had to turn away.

"The first stages are critical," she added. "The vat solutions must be kept uncontaminated, exactly balanced chemically, and irradiated with just the right intensity of light—since the swimmers live on light, even a few moments of darkness can kill them, by stopping photosynthesis. An exacting job, you see." She looked at him keenly. "Can you do it?"

"I think so." He tried desperately to mold his face into the stolid good humor of a lotus-eater. "I know I can!"

"Good." She gave him a quick smile of confidence. "The larger swimmers aren't quite so delicate. When they're old enough to leave the sterile vats inside, they develop an instinct which guides them on through the growing tanks outside. There, they need only sunlight and a few days of time to become adults, ready to climb out and dry their swimming membranes and go to work for the company."

Belfast mopped at the sweat on his face and studied the empty tanks again. Perhaps this elaborate process for the manufacture of intelligent slaves shouldn't seem remarkable to a man who remembered nothing else, but he found it hard to hide his dazed amazement. He felt grateful for the interruption, when another jeep came splashing up behind them.

"It's Vic Van Doon." And the girl called gladly, "Hi, Vic!"

A muscular, sun-browned man in faded shorts and shapeless pith helmet came wading through the mud to shake hands with her and the panting financier.

"Nan! J. D.! Good to see you!" His voice was bluff and vigorous, and his broad face was smooth with oblivion. "I wanted to meet you at the plane," he said, "but the jeep got stuck in a washout, up in the hills."

"The mines?" Messenger asked. "Did you get them running?"

Momentarily grave, Van Doon shook his head. "I took the best mules I had up there, but they're all too weak and old to do the work. And dying like flies."

"We'll soon have more." Nan turned. "Vic, this is Don Fallon. Our newest lotus-eater. He's to be in charge of the production section."

"Hello, Fallon." Van Doon caught his hand with a bone-cracking grip. "You'll never be sorry you came. I've been with the company three years, and never a regret. That virus is a sure cure for trouble-makers." He chuckled genially. "I believe I came to murder Mr. Potter and break the company—

right, J.D.?"

"Right," Messenger said. "Nearly did it, too."

Belfast looked away from Van Doon's smiling pride in that conversion, trying not to shiver. It made him sick to see how that virus had turned such a determined enemy of the company into this loyal slave, and for a moment his own plans seemed hopeless.

"No time to squander." Messenger straightened impatiently. "Let's get to work!"

DANE nodded, trying feebly to smile again. No matter how many before him had failed, his purpose was still undetected. Though he was disappointed to be shut out of the mutation lab, the products of it might tell him something about the process. And—in spite of Messenger's taboo—he still hoped to find a way inside.

"I'll bring you that memo, as soon as I can," Nan told him. "But you might start looking over the plant right away. We ought to have the first batch of swimmers ready by morning. You'll have to have everything sterile, and fresh solutions mixed."

"Wait here, Fallon," Van Doon added. "I'll send your assistants out with the keys." He turned to Messenger and the girl. "I've got the old Potter house ready for you. Nan, won't you ride over with me?"

She let him help her out of the jeep. Belfast climbed hastily out on the other side, to hide his flush of unwilling resentment. Let her go, he advised himself bitterly. She meant nothing to him except alien strangeness and shocking danger. The lotus-eater was welcome to her!

Left alone when the two jeeps lurched away, he walked stiffly out of the driving sun into the hot shade under the eaves of the production building. Waiting there, feeling the drops of sweat creeping like insects down his flanks and legs, he cautiously surveyed the mutation lab across the road.

The two riflemen returned his gaze suspiciously. He swung as casually as possible to examine the slope behind him, where those tiers of empty tanks dropped toward the river bottom. Searching for a back path to that fenced and guarded fortress, he paused abruptly when another riddle challenged him.

The jungle was alive with crocodiles and deadly insects and internal parasites and a hundred other shapes of death, but it had no warning glow of evil!

He frowned at the riddle of that lost danger-sense—or had it been a sense?

Nan Sanderson had been the common factor, it struck him, in all of those baffling experiences. She must have somehow caused those sensations. Had what he felt been her mutant mind, reaching out to read his thoughts and even to influence his actions?

He nodded uneasily. That would explain the absence of those feelings now—she had naturally relaxed her unknown faculties, when she thought the virus had made him her harmless tool. But when those sensations returned, they would mean she had decided to pick his mind again.

He shivered when he recognised her in the jeep, coming back with Messenger from the old Potter house. Her cheerful wave of greeting startled him unpleasantly. He managed to answer it stiffly, but he felt relieved when she drove on past him, into the fenced grounds of the mutation lab.

Four more lotus-eaters came up from the town in a rusty truck, with keys to the production section. Dane went in with his new assistants to explore the building. What he found was a long row of stainless steel vats, each larger than the next, all linked with a bewildering web of pipes and pumps and valves. Before he could finish inspecting the intricate auxiliary equipment of boilers and filters and floodlamps and thermostats and air-conditioning units, one of the men called him back to the door.

"Don?" A thin dread touched him

when he heard Nan Sanderson's voice, but he relaxed a little when he saw the folded papers in her hand. "The memo."

He took it silently.

"Follow it exactly," she told him. "Remember, an error of one minute or one degree or one percent might be enough to kill the swimmers."

Memo to Dr. Fallon, the first page was headed, in blue-black ink which had not yet darkened. The hand-printed characters staggered wearily, but they were stubbornly legible. In the first step, he read, the embryonic swimmers must be kept for eight minutes in ten liters of sterile water at 38 degrees Centigrade, under 96 foot-candles of filtered light. In step two—

Dane started, and then tried hard to stop the trembling of the pages in his fingers. For he had seen that same hand-printing—neater and more vigorous, but still the same—in letters written long ago. For all that wavering weakness, the slanted bar at the top of the *A* and the curved oblique stroke across the *f* and the back-slanted tails of the *g* and the *y* made it unmistakable.

The writing was Charles Kendrew's.

XI

NAN SANDERSON made him come with her down the descending row of vats. Pausing to show him how to operate each one, she let him study the instructions in that memo and then shot rapid questions to be sure he understood.

Dane followed her dazedly. His forced responses seemed painfully mechanical to him, but she appeared not to notice his disturbance. When they left the bottom vat, where the growing swimmers were expected to leap a low barrier to the tanks outside, she turned anxiously.

"Think you can do it?"

Huskily, he said he thought he understood everything. He walked with her out to the jeep, and watched her drive back toward that squat building beyond the barbed wire, which had the look of a prison now.

Stumbling slowly back to begin his own task, he studied that unsteady hand-printing again. No, he couldn't be mistaken—the writing was Kendrew's. The implications staggered him.

The memo proved that Messenger's eccentric plant breeder was actually Charles Kendrew—as his father had once suspected, before the financier somehow bribed or tricked him into forgetting the notion. Kendrew was the missing maker of the not-men, whom Gellhan was hunting.

And he was still alive!

Messenger and Nan Sanderson must have lied about "Potter's" illness and death, to discourage inquiries about him. That fresh ink and the words *Memo to Fallon* were sufficient evidence that the maker was not only still alive, but well and sane enough today to write these elaborate instructions for the care of his creations.

Alive—but the helpless prisoner, obviously, of the man who had been his friend and the inhuman creatures he had made. Somehow, Dane decided, they had compelled him to write this paper. Right now, no doubt, they were trying to make him create that mutant cell they needed so desperately.

Whatever the truth, the maker must be rescued. The present plight of his captors seemed to prove that they had not yet fully learned his arts. He must be set free before the not-men had extorted knowledge enough to make them forever invincible.

He went to work. All that breathless day and half the stifling night, he toiled with his crew to prepare the vats for those mutant cells. His mind was busier—turning over shadowy surmises and unsure conclusions, trying to imagine the maker's present situation and to plan a rescue.

The production unit was air-conditioned—but not, he found, for human comfort. The sterile, humid, superheated atmosphere required by the growing mules was even more distress-

ing than the fitful breath of the dying monsoon outside. By midnight, when at last the vats were ready to receive those strange seeds, he was limp and reeling with fatigue.

He picked one man from his cheerful crew to watch the instruments inside that steamy incubator, and posted another on guard inside the air-lock that kept out contaminated breezes. The others he sent back to their quarters in the river village.

"Stand by," he told the guard. "I'm going to catch a nap in the stock-room. Call me if anything comes from the mutation lab."

The dark stock-room, outside the air-lock, seemed incredibly cool and dry and comfortable. Lying on a cot, he heard the truck depart. The blowers of the air system droned softly, and rain hissed ceaselessly on the sheet metal roof. Occasional faint strange cries came from some jungle-bird, and he could hear the muted steady thudding of the diesel plant down by the town.

Those quiet sounds encouraged him. After a long half-hour of listening, he rolled silently off the cot, selected a pair of wire-cutting pliers from the tool-bins beside the door, and walked cautiously back into the dim hallway.

Silently, yet trying not to seem furtive, he let himself out of the building into the rain. Pouring straight down from a windless black sky, drumming on the metal roof, it fell with a surprising cold force that took his breath and made his teeth chatter for a moment.

LIGHTS on four tall steel masts flooded the fenced laboratory beyond the road, silhouetting the two motionless riflemen at the gate. He retreated from them quickly, into the long black shadow of the production building, which reached back to the straggling fringe of tall grass that edged the plateau.

That screened his path to a point on the other side of the clearing, where he was shielded from the guards by the low bulk of the mutation lab itself. He caught his breath there, and ran crouching out to the barbed wire.

For a moment, sprawled cautiously flat in the rain-beaten mud and reaching for the wire-cutters, he felt almost victorious. In his mind, he was already past the fence and the concrete walls ahead, inside the maker's prison.

He could see no lights within that windowless building, but the jeep parked outside assured him that Nan Sanderson and Messenger were still there, and his hot imagination saw them busy wringing the secret of creation from the man they had betrayed.

Creeping forward to cut the wire, he weighed the heavy pliers thoughtfully. Not much of a weapon—but he hoped to come silently upon those two; he must learn all he could before he struck. Messenger was a feeble old man. Nan, for all her unknown gifts, was still a girl. With a reasonable run of luck—

Alarm struck him.

The shock of it came when he touched the barbed wire, so abrupt that he thought for an instant that he had been hit by high voltage current. He recoiled, gasping for breath. The taste of danger bit his tongue again, and the sweetish jungle smell of wet decay was drowned under bitter deadliness.

He lay still in the cold muck, too stunned to move. But the wires were not insulated to carry current: that shock had been something else. It had lighted a dark blaze of jeopardy all around the building ahead, and it had chilled the rain on his back with the icy finality of death.

Was it Nan Sanderson's mind? He felt suddenly sure it was—and panic shook him. If he could feel the unknown power of her mutant brain, reaching out to guard the laboratory, she could doubtless sense his presence too. Once she found him here at the fence she wouldn't need to read his thoughts to learn that he was no true lotus-eater. A word to those riflemen would send him back into oblivion, to stay.

As soon as he could move, he started crawling away. For he had failed—and thrown his life away for nothing, if this venture were discovered. Whatever the nature of that barrier, it was impregnable.

He knelt once in a shallow rain-torrent to wash most of the clinging mud from his hands and knees and shoes. And he hurried on again, hoping now to get back unseen to the stock-room. He had almost reached the production lab, running silently up the black shadow behind it, when that feel of menace challenged him again.

Pausing to listen, he heard a door slam. Feet splashed in the rain-puddles. A starter growled, and a motor coughed, and gears clashed. He swung to run for the jungle, but the cold touch of danger froze him where he stood. The sweeping headlamps found him.

He was grateful then for the warning that had restrained his impulse to run, for he couldn't have reached any cover in time. The slightest false movement could destroy him now. He could only stride on toward the blinding lights, trying not to scowl too painfully, striving to recover his thin mask of forgetfulness.

"Well, Fallon." The loud voice of Van Doon halted him. "Where've you been?"

"Walking." He tried to shrug. "Just up the road."

"Weren't you trying to spy on the mutation lab?"

"What makes you think that?" He let resentment tinge his tone. "Mr. Messenger told me it's taboo."

"Sorry, Fallon." A surprising mildness softened that bleak voice. "You see, I woke up half an hour ago, feeling that something was wrong. When I called from town, the men found you gone. I was naturally upset, don't you see?"

Squinting against the headlamps, Dane quivered to a stab of suspicion. Real lotus-eaters were unlikely to be awakened by worry, it occurred to him. And this sudden conciliatory calm was overdone—as if Van Doon were another pretender, reminding himself to act like a slave of the virus. Too serenely, he was asking now:

"Do you know the reason for that taboo?"

"To protect the secret of mutation—"

"To save our lives," Van Doon said softly. "That fenced area has been infected, you see, with a hundred kinds of deadly mutant organisms. Mr Potter immunized Miss Sanderson and Mr. Messenger against them, but no intruder could get back outside that fence alive. Do you see why I was so upset about you?"

That was probably a lie, Dane thought, invented to keep people away from the mutation lab.

"Thanks," he said. "I'll stay away."

The jeep lurched away at last, and Dane stumbled heavily back into the production lab. He was chilled, and his knees felt weak, and failure lay heavy on him. Mutant or not, Van Doon was unlikely to let him make another attempt to reach the mutation lab The maker seemed as remote from him as a man already dead

XII

HE WAS waiting at the door next morning when Nan Sanderson and Messenger came across from the mutation lab, where they must have been all night.

"Ready, Don?" Nan waded through pools of yellow water, gingerly carrying a vacuum bottle. Fatigue had hollowed her cheeks, but her eyes had a burning expectation.

"We're ready," Dane nodded.

She put on a surgical mask and sterile gloves and boots and gown, and came with him through the air-lock into the main room. Frowning against the painful bluish glare of the germicidal lamps, she carefully opened the vacuum bottle to remove a stoppered, gauze-wrapped test tube.

"The next crop of mules." She handed Dane the test tube, half full of a greenish liquid. "Steady. You're holding the company's future—and your own."

He poured the liquid carefully into the solution ready in the first vat, and methodically set down the time and temperature. She stood watching silently, her eyes dark and anxious above the white mask.

The first eight minutes passed slowly. He opened a valve and started a pump to lift the solution into the larger second vat. Watching his deliberate care, the girl smiled approvingly. "Take good care of the mules!"

"I will," he promised.

Letting the girl out through the air-lock, he found himself trembling. She had left the future of Cadmus in his hands. The act of sabotage would be quite simple. He could kill the young swimmers by simply turning off a light for two or three minutes.

Yet that was impossible.

He had accomplished too little. And any attempt at sabotage would destroy his chance to reach the maker or to learn the aims and numbers of the mutants. He saw instantly that he must do his best to grow the mules.

He spent all day sweltering inside that humid incubator, faithfully reading dials and keeping records and turning valves to move the greenish spawn from each vat to the next, on schedule. The others on his crew were at work outside, filling the outdoor tanks.

Late that afternoon, while he was pumping the still-invisible swimmers into the last indoor vat, he heard a knock at the sealed glass door at the rear of the building, and turned to see Nan Sanderson and Messenger outside. Touching his mask, he shook his head and signaled for them to come around to the air-lock.

The girl beckoned him closer.

"You can let us in," she called through the heavy glass. "No contamination should hurt the swimmers now. They're ready for the tanks outside, and those aren't sterile, anyway."

Grasping for the patient obedience of a lotus-eater, he unsealed the door. Rest had erased the girl's fatigue, and the financier seemed himself again, carrying his flabby hulk with that old, surprising poise.

He asked anxiously, "How are they growing, Fallon?"

"I've followed that memo," Dane said. "That's all I know."

Bending laboriously to study the pale green solution beneath the blazing lamps, Messenger nodded with a massive approval.

"The color's all right." He gestured at a low-power microscope on a little bench beside the vat. "Let's see a sample."

Dane dipped a little of the solution into a Petri dish, and placed it below the lenses. The mutant creatures were instantly visible: tiny graceful fish-like shapes, swimming with swift undulations of those filmy membranes which would be modified into wing-like organs for photosynthesis in the grown mules. Fascinated, he kept looking until Messenger nudged him anxiously.

"Good!" the fat man whispered. "Potter's were just like that."

He gave his place to Nan, who smiled with such eagerness that Dane almost shared her joy. "They seem sound," she agreed. "They ought to be leaping soon."

THE SWIMMERS had now come to the stage when their own instincts should begin to drive them on from each vessel to the next. Dane unsealed the slit that would let them leap into the tank outside, while the girl was counting the individuals in the sample.

Messenger glanced at the figures she was setting down.

"Eighty-nine?" Triumph lit his yellow face. "The way Potter used to figure, that means nearly five billion in the batch! Enough to turn all the island back into a garden. And start the dollars and pounds and francs and marks and pesos and rubles to rolling in again!"

"They can save Cadmus," Nan said. "And more."

What else they could save, she didn't say. But Dane dared a glance at her as she stood watching the thin blade of stainless steel the tiny swimmers must jump. He could see her hope like a bright flame along it, and the darkness of her loneliness and her dread all around it, and he understood.

Cadmus was the fortress of her race. The mules had built it, and it had been falling into ruin since as they died. This new generation of those small slaves could make it powerful again—and Dane found it hard not to share her eagerness.

"They'll make a green mist over the blade," Messenger was whispering. "The billions of them crossing. I've seen it many times."

Dane adjusted the shining barrier to stand precisely at the level of the liquid. He snapped on the blue light above it, to trigger that phototrophic instinct, and raised the metal hood outside to protect the tiny swimmers as they fell into the tank.

And they waited.

No swimmers leapt, and after a long time Dane saw tiny bubbles beginning to rise through the liquid, leaving an oily, greenish scum where they burst. He leaned to look closer, and caught a faint but sickening stench. Pointing at that foul broth, he turned inquiringly to Messenger.

"Rotting. . . ." The financier's lax blue lips framed the word silently, and his puffy face sagged into a dreadful cadaverous emptiness. "Rotting alive. . . ."

He swayed to the microscope bench and lowered his cumbrous bulk to the stool there, clinging to the bench with his swollen hands as frantically as he clutched at life itself. "Still tough—as a mule!" His face twisted queerly, trying to grin. "Just find out—what's wrong."

White-lipped, Nan read the temperature of the vat and checked the intensity of the light above it and tested the green solution. Her trembling hands spilled one sample, and all he felt at last was pity for her quiet desperation.

"There's nothing wrong with the solution." Her bloodless hand pushed the rack of test tubes slowly from her. "Except that the swimmers are dying in it."

She turned gravely to Dane.

"This is a terrible blow to the company, Dr. Fallon. But you aren't responsible, in any way."

"Drain off that slop," Messenger rasped at him. "Sterilize the vats, and stand by." He swung ponderously from Dane to the girl. "We're going to try again tonight."

Declining any aid, he lumbered heavily away.

MESSENGER and Nan Sanderson returned to the mutation laboratory. The brief, hot dusk had fallen before he saw them emerge again, the man so feeble that he had to try three times before he could climb in the jeep, even with her aid. They drove past him toward the old Potter dwelling without stopping, but Nan glanced at him as they passed. She told him, with a tired shake of her head, that this time they had failed in their attempt to make a satisfactory batch of swimmers. Probably fatigue, Dane thought, as much as anything else.

The men on his night shift brought word from Van Doon that he wouldn't be needed until morning, and so he went back to the company town with the cheery lotus-eaters of his day crew, trying hard to be one of them. That night, lying in the windy chill of his air-conditioned room in the Cadmus House, he was a long time going to sleep.

"Dr. Fallon! Everybody out!"

He had been asleep at last, when that urgent voice disturbed him. He looked at his watch; it was three in the morning. Somebody began shaking the door of his room, and he got out of bed to open it. The man in the hall was one of the sunburned lotus-eaters he had seen guarding the mutation laboratory.

"What's up?" He felt too dull and

heavy with sleep to face any fresh crisis. "Van Doon sent word they wouldn't need me—"

"Everybody out!" the brown man broke in sharply. "Go straight to your post, and stand by for orders."

"To the production section, you mean?"

"If that's your post." The guard shrugged impatiently. "And stand by."

Dane's breath caught. "Is—is anything wrong?"

"An emergency alert." Even the lotus-eater looked somewhat upset. "There must be trouble somewhere, but that's all I know. You'd better get moving."

The man went on, to shout at the next door.

Dane dressed, trying sleepily to guess what sort of crisis had come up and what he ought to do. Several men ran past his door, but when he came out into the hall the old building seemed already empty.

He hurried out through the abandoned lobby into the warm tropic night. Outside, he found urgent activity. It wasn't exactly panic—the lotus-eaters were too calm for panic. Yet he caught a sense of frightened desperation.

Jeeps and trucks were jolting along the worn pavement, driven too fast. A bonfire was blazing against the dark two blocks away, in front of the company office building, and he saw hurried men tossing desks and chairs and bundled papers into the flames. From the airstrip across the river, he could hear the muffled thunder of motors being warmed up.

He went back to the parking area behind the building, but the jeep his crew had used was already gone. After a moment of indecision, he started walking out to the production section.

As he approached it, he saw a jeep coming back from the direction of the old Potter house. In the floodlights from the mutation laboratory, he recognized Van Doon and Nan Sanderson. Her luggage was piled in the rear. Van Doon was driving, and he stopped the vehicle across the road, at the gate in the laboratory fence.

Dane was standing in the open, outside the door of his own building, but they gave him no attention. Van Doon called the two guards to the jeep. While he sat talking to them, the girl got out. She was wearing white coveralls. Without a glance at Dane, she ran up the gravel drive and disappeared inside the laboratory.

She was gone perhaps five minutes, Dane thought, though the time seemed longer. After their brief talk with Van Doon, the two riflemen got in the jeep, to sit on the luggage in the back. Waiting at the wheel, Van Doon sat watching the drive impatiently.

Dane was taut with a troubled expectation. Aircraft engines still thundered dully in the night; he saw the lifting lights of one plane taking off. Nan's luggage, with all those other signs of hurried departure, made him think the mutants must be retreating again, even from this hidden fastness.

He tried for a moment to imagine where they might be going, but that puzzle was swept from his mind by a quick concern for the maker. He had seen men burning papers outside the company office building, but surely that creative brain was a record too precious to be destroyed. He waited with a painful anxiety for Nan to emerge with her prisoner—and he felt sick when he saw her come running back alone.

SHE GOT into the jeep with Van Doon and the two riflemen. The idling motor roared instantly. The little vehicle skidded back into the muddy ruts, and the red tail lamps fled into the dark with what seemed a guilty haste. Dane turned back toward the now unguarded laboratory, afraid to wonder what her errand there had been. He made a sick effort to stop his mind from seeing the beheaded body of Nicholas Venn. A raucous horn called him back. Another jeep was jolting back from the old Potter dwelling. It pulled to a halt.

"Here, Fallon!" Messenger called faintly from the rear seat. His face looked gray and cadaverous when Dane saw him in the dimness.

"We're closing the production section," he whispered asthmatically. "Before you leave, I want you to burn all your papers. That technical memo. All your records on the swimmers you processed. Any notes you've made. I'll send a jeep back for you."

Dane asked, "Is something wrong?"

"Everything." Messenger's voice was husky with despair. "We've an enemy—a man who thinks we've misused the art of mutation. We've stood him off for years. Fought his influence with company money, and captured his agents with the virus. His name is Gellian."

"Gellian?" Dane tried to speak as if he had never heard the name. "What can he do?"

"Plenty!" Messenger said bitterly. "He's managed to convince a group of political and military leaders that we are manufacturing superhuman mutants that are dangerous to mankind. They're sending a military expedition to destroy us."

Dane waited, while the sick man struggled to breathe.

"The code name for it is Operation Survival," Messenger went on at last. "Men from several nations are taking part. Most of them have been told that they're wiping out an illicit private atomic research center—a lie evidently intended to confuse people who might oppose genocide. Van Doon says military aircraft are already headed this way from several Australian and island bases. We're trying to evacuate everybody before they arrive."

Dane wet his lips. "Where—where are we going?"

"You lotus-eaters will be scattered here and there about our other New Guinea installations," Messenger said. "Van Doon has given the orders for that—but the less any of you remember, when Gellian gets hold of you, the better."

He nudged the driver impatiently and the jeep shot forward.

"Burn your papers," Messenger called back. "And wait here."

Dane crumpled all the notes and records he had made into a quick little blaze on the concrete floor of the stockroom, but he saved that memo in the writing of Charles Kendrew.

Back at the door, he peered cautiously up and down those muddy ruts. The smoky glare of that dying fire still shone above the jungle, and busy traffic still crawled along the road between the airstrip and the town, but he saw no nearer lights. He caught his breath, and ran across the road to the mutation laboratory.

This time nothing stopped him. No shock of danger dazed him. He saw no dark blaze of evil, and met no dusty deadliness, and felt no chill of warning. If any mutant cysts or spores were taking root in his flesh, he was not aware of them.

Surprisingly, Nan Sanderson had left the door unlocked. It opened to his trembling touch. Darkness met him, and empty silence. He wanted to call out, but his throat was suddenly too dry. He groped beside the door, and found a switch. Light struck him, cruel as a blow.

For it showed him no prisoner, but a shocking riddle instead. The whole building was only one long room. Stumbling out to the center of it, he peered around him at the naked concrete walls. He gulped and wet his lips and shook his head.

He saw no bars to hold the aged prisoner of his imagination. No chairs; no sign of violence; no arrangements for any sort of long-continued occupancy. It gave him an irrational relief to know that Nan Sanderson had not come back to kill the maker—because obviously there had been nobody here to kill.

The room was queerly bare, neither prison nor fortress nor even laboratory. A white-enameled kitchen table stood near the center of the clean concrete

floor, with two kitchen chairs beside it. Arranged on the table were half a dozen empty test tubes in a small wooden rack, a tiny alcohol burner, a few sealed ampules of sterile water, and a stain of green slime drying in a Petri dish—a culture of that alga, perhaps, from which the green mules had been mutated.

Near the table was a little pile of ashes, where papers had been burned—that, he thought, must have been what Nan came back to do.

But he found no equipment for the unknown art of genetic engineering. No sterile incubators. No carboys of chemicals No centrifuges or electron microscopes or X-ray machines. He knew a dozen methods of causing useless random mutations, but he saw no apparatus even for those inadequte processes.

"Well, Dane?"

He thought he had closed the door, and he hadn't heard it open, but Nan was standing in it when he turned. Framed against the dark, she looked slim but not boyish in the white coveralls. Her face was haggard. Her level voice seemed disarming, but he thought she had come to kill him.

XIII

DANE HAD picked up a scrap of fragile ash, from where the papers had been burned on the floor. He was peering at it when she spoke, trying to read the traces of writing. His fingers crushed it with a sudden tension of alarm, but he tried to recover his mask of forgetfulness.

"Mr. Messenger told me to burn all our papers." He grinned feebly, with a sick imitation of a lotus-eater. "I just came across the road to see—"

His voice shuddered to a stop, for he realized then that she had called him Dane. That meant she knew he had his memory back. He retreated a little, absently wiping the black ash from his fingers, watching her bleakly.

Her ivory hands hung open and empty, but that was not reassuring when he recalled the inconspicuous weapon with which she had knocked him out before. No douht she was adequately armed, but still she made no threatening gesture, and it struck him that she wasn't ready to kill him, yet.

His presence here was enough to prove him no faithful slave of the company. But she would want to know how much he knew and what else he had done, before she erased his memory again—and this time surely his life.

She was asking quietly, "What were you doing here?"

He straightened defiantly. No deception was likely to succeed again, and he said evenly, "I came to look for Charles Kendrew."

Her nostrils flared slightly, as she caught her hreath. Her face tightened, but her eyes told him nothing. She nodded at the empty room around them, and her low-voiced question was a challenge.

"Did you find him?"

"I—I don't know."

He stiffened, and looked at her searchingly. For that faintly mocking query had set his mind to work at last, on the new fact of this empty room. Although this was not the maker's prison, and obviously had never been, she had brought the mutant cells from here, and that memo—

"I'm not quite sure I found Kendrew." He spoke slowly, watching her pale hostility, waiting to see her reaction. "But I'd like to see a sample of Mr. Messenger's writing."

"So you think he is Charles Kendrew?" She was frowning at him as if with a troubled astonishment, but still she had revealed no weapon. "Why?"

"I know Kendrew's alive," he said. "Because I recognized his writing on that *Memo to Fallon*. You brought it from this building, and the only man here was Messenger. He's about the right age, when you come to think of it. Though he doesn't resemble the pictures

I've seen of Kendrew as a young man, you'd hardly expect him to. Kendrew was disfigured by burns about the time he disappeared—and Messenger's face is scarred!"

She shook her head. "Pretty inadequate evidence."

"There's more than that." Conviction steadied his voice. "A great deal more, when you come to see it. Messenger has always controlled Kendrew's discoveries. He was unexpectedly generous to my father—who had been Kendrew's friend. He is still fighting with all his cunning to defend Kendrew's creations. Isn't he?"

HE PAUSED again, watching the girl, but she failed to answer. Her troubled eyes seemed to weigh him, narrowing with doubt. Waiting for her to decide when to erase his inconvenient recollections, he returned to the logical consequences of this empty room—and they startled him.

"Nan!" He caught his breath. "When I accused you of murdering Nicholas Venn—why didn't you deny it?"

"No denial would have made any difference to you then." He saw the flicker in her troubled eyes, but her voice kept strangely calm. "Would it matter now?"

"I had reason enough to believe you killed him, then," he said defensively. "You were in his room within a few minutes of his death. You knocked him out with the same sort of shot you used on me—his upper lip had oozed blood where it struck. You robbed him of that dead mule. You took the manuscript he was writing, and my brief case . . . But now I know you didn't kill him!"

"You do?" Her searching, impersonal gaze reminded him that he was only human, and she something more. "How do you know?"

"Because Messenger is Charles Kendrew."

"How does that apply?"

He started to answer and paused uncomfortably before her probing gaze. She had stepped a little toward him out of the black rectangle of the doorway—and he thought from the way she studied him that his words meant less to her than the unconscious reactions of voice and face and gesture that he could not control.

"Messenger didn't murder Venn," she said quietly. "Neither did Charles Kendrew. Neither, in fact, did I. But the question is why you've decided I didn't."

"You aren't human." The words struck fear in Dane, even as he spoke them. For that was a dreadful accusation. The tone of his own voice brought back the shrill voice of a child from long ago, saying that he wasn't white. He felt that Nan would be wounded and angered, and he couldn't go on.

"I am a mutant." Her voice was brisk and cool. She didn't seem offended, but that wary aloofness veiled whatever she felt. "But we were talking about murder," she said. "And why you changed your mind."

"You didn't kill him because you didn't need to. That virus you shot into his face would have wiped out all he knew, and made him another loyal employee of the company. Wouldn't it?"

She stood watching him as if looking for something more significant than anything he could say, and it took her a long time to answer.

"Perhaps." Her voice was curiously casual, as if it didn't really matter what he thought about her guilt. "But somebody killed Venn."

"If you didn't, it must have been Gellian's men."

Somewhat to his surprise, she nodded.

She spoke offhandedly, her mind still on something else. "Gellian's killers had a reason for thinking Venn was a mutant."

"Then I suppose my visit clinched the case against him! But—why were they watching him—why did they take him for a mutant?"

NAN DIDN'T answer at once. She had come halfway toward him across the empty room, and now she paused again,

surveying him with a critical alertness. She frowned a little, and nodded slightly, as if making up her mind.

"Venn had come back from New Guinea with his memory undamaged," she said at last. "The others who went inland with him lost theirs, from virus encephalitis. Gellian's men believed that Venn had been exposed, too, although in fact he had never reached an infected area. They thought he was immune."

"I don't quite see the connection." Dane shook his head. "You mean they killed him because the virus didn't hit him?"

"You see, we mutants are naturally immune." Her low voice seemed faintly malicious. "In cases where the psi capacity is still dormant, that virus is sometimes the only positive test to tell our kind from men," she added softly.

Dane started back from her, but something froze him. For a long time he couldn't move or speak or even breathe. The white-walled room seemed to blur and darken and spin around him insanely, so that all he could see clearly was her ivory loveliness.

"I—" He couldn't speak, but his dry lips moved silently. "I must be immune!"

The fact was monstrous, but he could not escape. The clues pursued him through the flickering darkness of his mind. All the things he had known before, the signs he had been afraid to see: his mixed blood, like Nan's; his father's old friendship with the maker; his mother's psychic gift; his own danger-sense—was that some hidden psychophysical gift, just beginning to stir in him?

"You're immune." She was nodding soberly. "You're another mutant."

"It can't be true," he muttered feebly. "You tested me yourself—and you said I didn't pass."

"But I didn't try the virus on you—not that time." She was smiling slightly now, and she seemed less remote. "No other test is definite, in cases like yours where the psi capacity is still latent."

He shook his head unbelievingly.

"We were designed, you see, to hide among mankind until we are old enough to protect ourselves." She seemed amused at his confusion, yet her faint little smile was not unkind.

"It's too much to accept, all at once." He stared at her dazedly. "I need time to get adjusted—"

She checked him with a troubled gesture. They listened, and he heard the faint beep of a horn outside. He looked at her uneasily.

"I'm afraid you'll have to do your adjusting on the run." She turned quickly toward the door. "And it's time now for us to start, because the first aircraft of Gellian's Operation Survival will be here by dawn."

He followed her out into the night. Now he understood why she had been observing him so critically. She had been testing him again, to decide whether he belonged to her new race and whether he would do to trust. And this time he had passed.

FROM the laboratory door, Dane saw the jeep waiting under the floodlight at the foot of the gravel drive. Van Doon sat at the wheel, impatiently erect. The horn blared again.

"We should have been gone already." Nan caught his arm, to hurry him toward the jeep. "We were already at the airstrip when I had a feeling about you—that I ought to come back. An extrasensory perception, I suppose, though my own psi capacity is still pretty erratic. Anyhow, I made Vic bring me to see about you."

He glanced aside at her uncertainly.

"And now you want me to come with you—where?"

"We've one last refuge," she said. "Another place where we can hide—if we get there before Gellian overtakes us. I can't tell anybody where it is, until we reach it."

The jungle town looked abandoned as they jolted through it. All the lights were out, and the warehouse had burned to red embers: The airstrip beyond the

long bridge was still lighted, however, and the muddy roads around it still crowded with lotus-eaters sitting patiently in their jeeps and trucks, waiting to be evacuated.

Messenger's plane was standing at the end of the strip, with half a dozen other company aircraft drawn up behind it. Cheerful brown men put them quickly aboard. Van Doon hurried forward to the cockpit, and the plane began to move at once.

They found Messenger himself in the lounge, sprawled helplessly back in a chair. Dane peered at him, shaken with a mixture of emotions. Age and sickness and his strange conflict with his fellow men all had left their ugly scars upon him. His eyes were pale and cold in their deep yellow wells of bloated flesh, and he peered up at Dane with an air of sleepy hostility.

Yet he was the maker.

"I went back to look for Dr Belfast." Nan lowered her voice as if to be certain Van Doon didn't hear. "I found him in the mutation lab, looking for your handwriting on the ash of the papers I burned. He remembers everything. He's immune—another one of us."

"That's wonderful!" Hitching his gross bulk laboriously forward, he gave Dane his feeble hand. "Your father was my best friend. I was terribly disappointed in New York, when Nan told me you had failed the psi test. It makes me feel better to have you with us now."

"I'll have to get used to all this." Dane smiled uncertainly, and some lingering doubt made him ask, "If you don't mind —may I see a sample of your writing?"

"I don't blame you!" The old man's smile made the shattered bits of his lost charm seem almost whole again. "Find me a piece of paper."

Dane fumbled in his pockets. What he found was the folded *Memo to Fallon.* He gave that to the fat man with his pen, and watched the swollen fingers write painfully:

Charles Kendrew, alias Charles Potter, alias J. D. Messenger.

He unfolded the memo to compare the two specimens, and set them both against the old letters in his memory. They were all the same. The *t's* in *Potter* were crossed in Kendrew's way, and the tails of the *g's* were all alike. He began tearing the memo into fine scraps, and he whispered huskily:

"Thank you—Dr. Kendrew."

"Please call me Messenger," the big man gasped. "A safer name to wear!"

"It must be," Dane agreed feelingly. "So long as men like Gellian are hunting Charles Kendrew."

"More useful, too," the sick man whispered soberly. "Kendrew, with his naive approach, had failed Homo excellens. Messenger, the financier, with his new personality and his indirect methods, was able to create Cadmus to shelter them."

"So you walked into these jungles as Charles Kendrew, and came out again—"

"But forget all that," Nan put in warningly. "Even when we're alone, we make it a rule to keep up the fiction that Kendrew changed his name to Potter and died there on the Fly."

"You have been pretty consistent with that deception." Dane smiled. "Talking to me about Potter, as if he had been a real person, even when you thought I was another faithful lotus-eater."

"The lotus-eaters must believe the story, because so many of our enemies are always trying to pump them. And we must believe it ourselves, as nearly as we can," she added quietly. "Just one slip could kill us all."

THE PLANE was taking off now, roaring along the strip and jolting unexpectedly into holes the green mules had failed to fill. Messenger clung to the arms of his chair, breathless and pale, as if the jolts had hurt him. Nan moved anxiously to stand by his side until they were aloft, and stooped then to take his pulse.

Messenger gave Dane a feeble smile. "Now that you're on our side, I hope you can help us get away from Gellian."

"I'll do what I can," he promised uneasily. "But everything seems too new and strange, and there's still too much I don't know. I can't quite see the need for all this secrecy and deception, when you were doing something good."

"Neither could I, in the beginning," Messenger said bitterly. "I didn't understand how Homo sapiens would feel about Homo excellens. Madge was the one who began to teach me that—she was my wife."

Dane saw the pain on Messenger's splotched face, and he remembered the clippings he had found in his father's files, which told how Margaret Kendrew had tried to kill her husband, and then destroyed her child and herself.

"I loved her." Messenger's little eyes were blinking, and Dane thought he saw the gleam of tears. "She was the finest sort of woman. A gifted scientist—without her help, I couldn't have perfected the methods of genetic engineering."

Messenger had to pause, gasping as if emotion had taken his shallow breath.

"My father knew her," Dane said. "He liked her. He used to say he couldn't imagine what happened, there in Albuquerque, unless she lost her mind."

"She was sane," Messenger insisted. "As sane at least as most human beings. She used to share my dream of creating a more perfect race. For years, we worked together toward that great goal. Our own little daughter was the first successfully directed human mutation—a more precocious type than such later ones as you and Nan, because I hadn't learned the danger then. Madge must have been proud at first, with a normal human pride. But then those gifts began to frighten her, when she realized how far they went beyond humanity.

"I tried to make her see all the good that Homo excellens could bring mankind, and I thought at the time that she did. She said nothing more about it—she must have been already desperate with her fear of the child. The thing she did was a hideous surprise to me, but she did it because she was human—I see that now."

Dane shook his head uneasily. "It's hard to understand how any sane woman could murder her own child."

"Human beings have a herd instinct," the maker said. "I suppose it was useful for survival once, and it's still a powerful drive—it was stronger in Madge than her mother love." The small eyes peered at him with a sad intentness.

His spotted ugliness and his helpless decay stung Dane to ask, with a sudden unbelief, "If you're the maker—if you can really create Homo excellens—why didn't you do something for yourself?"

AT FIRST Messenger didn't seem to hear. His eyes stayed closed while he exhaled, with raucous snoring sound, and strove to inhale again. But at last he stirred slightly in the chair, peering dimly back at Dane.

"Because I couldn't." His voice was faint and slow and dull with weariness. "All I ever learned how to do was to rebuild the genes in one cell at a time. Each crop of mules grew from a single germ cell. So did you, Dane—from one cell, in which I rearranged the genes after the instant of fertilization, to enlarge your heritage from Homo sapiens."

Dane wanted to know how that was done, but he felt curiously hesitant about inquiring.

"The rebuilding of just one cell requires hours of exhausting effort—and usually weeks of observation and preparation." Messenger's gross shoulders shrugged feebly. "There are trillions of cells in my body. I never even hoped to remake myself."

Dane could see that Messenger had already talked too long. He felt touched by the predicament of a creator unable to recreate himself. He knew he ought to let the maker rest, yet he was driven on to ask more questions by a new fear that the sick man had lost the art of creation.

"Back there at the lab—" he said huskily. "Did you forget the process?"

"I'm just too old." Messenger had to

fight for breath again, but his feeble voice seemed oddly calm when he went on. "Heart bad. Arteries brittle. Cerebral hemorrhage two years ago, caused by a brain tumor—that's what put the skids under Cadmus. The tumor was removed, but I haven't been able to mutate anything since."

"But now you're teaching Nan?"

"She's learning." He smiled feebly. "She knows the theory already. She's not quite mature enough to work it, yet, but someday she can do more than I ever did—if she gets away from Gellian."

"That's going to take some doing!" Nan spoke from the compartment door behind them, and she was pale with strain when Dane turned to see her. "It seems we were a little too slow about taking off."

Dane went toward her uneasily. "What's wrong?"

"Operation Survival seems to be moving about two hours ahead of the time-table we had set up for it," she told him. "Vic has been searching with the radar, and he just picked up a flight of aircraft coming in from Australia. Maybe a hundred miles behind us."

"Have they discovered us?"

"They surely have," she said. "But all our company planes are up now, scattering. I hope they won't know which one to follow. Vic's trying to slip out of radar range beyond the mountains, and that means we'll be climbing right away."

DANE turned apprehensively to the windows. The night was still dark outside, and even the stars were hidden by a high overcast, so that the plane seemed to hang in its own black universe.

Yet he could see the broad wing above the windows, because it was filmed with a dark fire of danger. He had the feeling of peril nearer and more deadly than the threat of those hostile aircraft lost in the night behind—a feeling that puzzled and frightened him.

He turned back to Messenger. "I'm anxious to ask you about something else—a feeling of danger, that I don't understand. A shock, sometimes. Or a glow or an odor or a taste. Can you explain that?"

"ESP," the sick man whispered. "You'll understand it better when you know more about genetic engineering."

Dane's knees felt weak with his eagerness. He sat down heavily in the chair beside the bed. His heart was pounding, and his breath seemed suddenly as short as Messenger's.

"I've been looking for a way to direct mutations, ever since my father first told me about you," he whispered huskily. "I had decided it was impossible, until I began seeing the things you had made. How do you do it?"

"It isn't easy." Messenger's careful voice was so faint that he had to strain to hear, and agonizingly slow. "I worked for years to untangle the structure of the genes with electron microscopes, but they don't reveal enough. I tried every physical agency that causes mutations. Temperature. Pressure. Radiations. Chemicals. Ultrasonic vibration. None of them offered any promise of the fine control you need to move the atoms in one gene and leave the next one unchanged. I was ready to give up, when Madge helped me perfect a finer tool."

"Huh?" Dane blinked. "What other tool is possible?"

The maker's eyes had closed. He lay motionless for a long time, not even breathing. His blotched flesh seemed bloodless. At last, however, he inhaled again, and looked keenly back at Dane.

"The mind," he whispered. "The mind alone—that is the finest tool. Delicate and quick enough to grasp a single gene and rearrange its atoms in any way you like, with no danger of disturbing anything else in the living cell where you must work."

"The mind alone?" Dane stared at him. "What do you mean by that?"

"My wife was psychic, as people used

to put it," he explained laboriously. "Like your own mother. Before we married, she had been a research parapsychologist. She saw my problem, and helped me solve it."

"With psychokinesis?"

"Call it that, if you want." Messenger nodded feebly. "That's a word. I don't know quite what it means to you or to anybody else. What Madge and I discovered is a fact. A process that works—though it may not fit the word, exactly."

"Yes?"

Messenger heaved himself a little higher against the pillows. "Madge had worked with Rhine at Duke University," he went on. "She had already got her great idea, though she hadn't done much with it. That was to link mind and time."

"How's that?"

"The mind works in time," Messenger said. "The flow of consciousness shows a time-factor, and nearly every datum of parapsychology points the same way. With that for a start, Madge had come up with a new explanation of the electrical brain waves recorded by the electroencephalograph."

He had to gasp for air, as if exhausted by that word.

"Those waves are rapid pulsations of voltage in the brain tissue," he continued. "Her idea was that the voltage changes are caused by the rhythmic vibration of atoms or electrons in the plane of time."

Dane leaned nearer, not quite sure what he had heard.

"In time—not space." The faint voice was difficult to hear, but Dane had a sense of the vigorous mind behind it, striving robustly to reach him. "You can see that the electrical effect of such a vibrating particle would fall to zero as it swings away in time, and then increase again as it returns.

"Enough such particles, vibrating in unison, would cause the voltage pulsations we find. The duration of one wave, Madge thought, determines the instant that is *now*. Each new wave creates a new *now* and carries the consciousness on from the old, leaving it a part of the past."

MESSENGER stopped to rest again, limp and almost lifeless on his pillows.

"A simple notion," he toiled on at last. "But it seems to explain many things. The simplest living molecules—the viruses and genes—must be built around single particles vibrating in time. And fission must begin when another particle begins vibrating in unison."

"An exciting idea!" Dane whispered breathlessly. "But—if mental energy can affect physical particles—don't you have trouble about the conservation of energy?"

"That energy in time is still physical," Messenger answered. "I've no time to write the equations, but mind is a function of the energy-flow, back and forth, between space and time. The oldest proof of that is the temperature drop that accompanies any massive psychophysical effect—when heat is drawn from the air to become the literal force of mind.

"The same sort of transfer is going on all the time, in every human brain and every living cell, although it's usually harder to detect, because the amount of heat absorbed is exactly balanced, in the long run, by the new heat generated as the vital energy is spent."

Dane nodded, in awed comprehension.

"So you did prove her theory?"

"A little of it—though the vibration in time is far more rapid than she first thought, and the brain waves seem to be due to a sort of ebb and flow between the spatial and temporal states of energy. Most of the theory is still debatable, as useful theories generally are. But it has served us pretty well."

Messenger closed his eyes to rest again, and it seemed a long time to Dane before he resumed:

"That energy of life obeys its own

special laws. Its dual nature gives it a limited independence from both space and time. Though it usually comes from the transformation of heat in our own nerve cells, a receptive brain can sometimes draw it from another—that is telepathy.

"Or a trained and gifted mind can absorb it from any sort of objects at nearly any distance—that is the basis of direct extrasensory perception.

"Usually, we spend it to operate our own nervous systems, but it can be spent on distant objects—that's psychokinesis, if you wish to use the word. A difficult trick, for Homo sapiens."

The maker lay back to rest again, watching Dean with a look of speculation in his faded eyes. He smiled at last wistfully.

"It ought to be easier for you," he whispered. "But it's so hard for us that Madge had given up proving her theory, before I met her. Even after we tackled it together, it took us years to learn how to apply that actual force of mind to a few atoms in one molecule at a time. And that's all we could ever do."

DANE had been listening too desperately to breathe. He straightened when Messenger paused, and they both gasped for air. He nodded slowly.

"So that's the way you made us?"

"It wasn't quite that simple." Messenger gave him a wry little grin. "There's only a brief critical time, you see, when the genes can be rearranged to make a successful human mutation. That is just after the moment of conception, when the fertilized ovum is ready to begin development."

"I can see that." Dane nodded quickly. "With all the millions of different male gametes competing to reach the egg cell, you couldn't know the combination of available genes until one of them has entered it. And soon afterwards, the cleavage of the fertilized cell would form more genes than you could change."

"Exactly," Messenger panted. "The act of mutation must be completed before the cell division begins. But that crucial time is far too short for all the work that must be done to shape such a complex being as you or Nan. It takes days, or even weeks, to chart all the significant genes involved and discover what traits they carry and work out all the changes to be made."

"But you did it." Wonder quickened Dane's low voice. "How?"

"With training, we were able to focus our new perceptions on a living germ cell," the old man whispered laboriously. "That selected cell could remain undisturbed in the mother's body, because we didn't have to be near it in space. And we were able at last to get around that problem of time, when we learned how to look a little way into the future."

"Prevision?" Dane stiffened with astonishment.

"That follows logically enough from the temporal factor we had already found in life and mind," Messenger insisted patiently. "You and Nan should be better at it, when you grow up, but Madge and I could never see more than just one cell, as it would be no longer than a few weeks ahead.

"In that limited time, we had to complete all our studies of the genetic possibilities of the cell we had chosen, and plan the gene-shifts that would remove all the old hereditary faults and replace them with the gifts of the new race. When the crucial instant came, we had to be ready for the few hours of concentrated effort that would make the coming child Homo excellens."

"So you could plan the work ahead?" Dane nodded, frowning. "But you had to wait for the crucial moment, before you did it?"

"Right," Messenger murmured feebly. "We could see that little way into the future, but we could never reach into it, not even to move one atom. Perhaps we had run into some undiscovered natural law."

"But that must have been a wonderful thing," Dane insisted, still grave with his awe. "Reaching out with just your mind to explore and shift the genes to shape a new species! And all, I suppose, without our parents knowing that anything was happening?"

"It had to be that way." The maker's bloated face was suddenly tired and sad. "Madge taught me that, when she turned against me and tried to wreck our great experiment. I'm afraid the old race is too intolerant to accept the new."

DANE nodded bleakly, thinking of Gellian's campaign of extermination and the military forces of Operation Survival closing in upon them now. He didn't want to fight the mother race, but he could see no promise of any sort of truce. Genetic engineering seemed to be the only hope for those it had created, and he turned his mind back to that.

"How did Nan come to be looking for the mutants, at the Sanderson Service?" he asked abruptly. "Didn't you already know who we were?"

Laboriously, Messenger shook his head.

"Don't forget the difficulties I had to work against," he panted huskily. "I was forced to work with strangers, I had to guess about too many traits and their linkages. I knew that blunders were inevitable. But I didn't expect the imperfect mutations to be quite so dangerous, and I wasn't prepared to have their twisted gifts turned against me by such men as Gellian."

He had to pause again, panting noisily, but at last he continued: "Because of all those dangers, I nearly always had to move along again, before the mutant children were born. I couldn't follow them up, to help with their care or even to check the results of my work, without too much risk of exposing them. Nan is one of the few I was able to keep with me."

"Because her parents were your friends?" Dane's breath caught, and he leaned forward suddenly. "I wonder—did you know my mother, too?"

"Before your father ever saw her." The old man smiled fondly. "In the Manila hospital where she worked. When I was there for plastic surgery—getting some of Charles Kendrew's scars erased, to smooth the way for J. D. Messenger."

"You must have known I was a mutant. I don't understand why you didn't tell me—or why Nan gave me that test I failed to pass."

"But I didn't know," Messenger protested. "I knew only that you might be. I couldn't keep any records, you see, for fear of men like Gellian, and usually I had no way of learning the circumstances of the birth. When the mutant cell failed to develop, the next ovulation was likely to produce a human child. In many cases—in your own—I had no way of knowing which had happened until Nan could run her tests. When you failed, I was forced to assume that you were Homo sapiens. In reality, your psi capacity was still too much retarded to let you call those cards."

He lifted his head to blink weakly at Dane.

"But you say it is awakening now?"

"I have this feeling of danger—"

Dane caught his breath and stiffened, for that fitful awareness had come back when he thought of it, overwhelmingly intense. Sudden peril burned his tongue like acid, and it hung like some fuming poison in the air. It chilled him like a sudden wind and it throbbed in his brain like a warning gong. It was a glare of darkness, flaming over everything around him.

"I feel it now!" His breath and voice were gone, leaving his agitated whisper as faint as Messenger's. "I can taste it and smell it and hear it and see it—coming closer every second."

He felt the room door open, and he saw that dreadful glare strike through it and fall upon the maker.

Van Doon came in.

XV

MESSENGER seemed unaware of any danger from Van Doon. He turned stiffly on his pillows, and his watery eyes blinked hopefully at the man in the doorway.

"Well, Vic?" he whispered anxiously. "How are we doing, with Operation Survival?"

"We're still surviving." The stocky man grinned easily. "I think we've got away from Gellian. Since we crossed the mountains, the radar shows no aircraft behind. Nan has been telling me what course to fly, but she says she doesn't know our final destination."

The sick man studied him shrewdly. "I'll tell you when the time comes," he murmured softly. "Until I do, just fly the course Nan gives you. That will bring us in sight of a certain mountain peak. When we get there, I'll come to the cockpit and show you where to land."

Van Doon protested, with an air of slight impatience, "Hadn't you better just tell me where we're going, so you can relax while I fly us in?"

Messenger shook his head weakly—and Dane shivered to another chill of danger. He could feel the veiled violence behind Van Doon's sunburned smile, and his muscles tightened to meet some murderous attack.

"Our destination's too well hidden for that," the maker was whispering. "I'll have to point it out."

"If you say so." Van Doon nodded casually—too casually, it seemed to Dane. "I was just trying to save trouble for you. I'll have Nan call you, when we see that mountain."

He glanced at Dane, too carelessly, and smiled at Messenger too openly, and slowly turned to go. That icy feel of danger went with him. The glare of darkness faded from around the maker, and Dane gulped for air that now was clean enough to breathe again.

"I'm glad you didn't tell him anything," he whispered impulsively. "I don't trust him—even if he is a mutant."

Messenger stiffened against the pillows.

"Vic Van Doon?" His small eyes blinked painfully beneath the folds of swollen flesh. "What makes you think he's a mutant?"

"The way he behaves." Dane frowned uncertainly, groping for his evidence. "He isn't relaxed, like all the men who've really had that synthetic brain fever. He's desperate—and trying to hide his desperation. I first noticed it when I was pretending to be a lotus-eater, the way I think he is."

"So that's all?" Messenger grinned with relief. "You had me frightened."

"I'm still frightened," Dane insisted. "Since you didn't know he's a mutant, I'm afraid he's working against you. Maybe he isn't grateful for being mutated!"

"You're just worn out and upset." Messenger seemed as cheery as Van Doon had been. "Nan used to imagine all sorts of things, when her psi capacity was beginning to awake. Yours will do you more harm than good, until you learn how to use it. Better forget about Van Doon."

"*Could* he be a mutant?" Dane looked at the maker, searchingly. "Nan ought to know, if she investigated all your efforts at human mutation."

"She trusts him," Messenger said. "As completely as I do."

"But would she *know?*"

Messenger shook his head, with a mild impatience. "There were a good many of the older ones she failed to trace. In all those years, the parents had often moved or died, and her methods of search were limited by the danger of leaving clues for Gellian—"

He paused when he saw Nan at the door, beckoning.

"Please, Dane," she whispered. "Mr. Messenger needs rest."

"But I'm not tired at all." The maker turned stiffly on the pillows to face her. "I'm feeling unusually fine," he gasped faintly. "We've been having a talk." He

winked solemnly at Dane. "A very interesting talk, about creation."

"It's over now," she told him. "And you both need sleep."

Reluctantly, Dane helped Messenger to his cabin and went back to the lounge. He glanced at the windows, but they were filmed with rain and all he could see outside was dense cloud driving past the wings. He sat down wearily, because there was nothing else to do. For a time he fought his aching weariness, but at last he must have fallen asleep.

"Well, Dane!" Nan's voice aroused him. "Here we are."

She stood near him in the lounge, looking outside. The strong light from the windows found all the red in her hair, and it made her fine skin a kind of pink, translucent ivory. She looked flushed and lovely with elation.

"We've got away from Gellian," she said. "This is our refuge, and now I think we're safe from men."

HE HURRIED to her side, and looked out eagerly. Far below them, he could see tangled mountains, all covered with the crowded tufts of great trees which made them seem deceptively soft, like a wrinkled rug. Ahead of the plane, above the vivid green of the sunlit forest, a dark wilderness of tumbled boulders lifted to the foot of a sheer basalt precipice. Above the cliffs, a great peak stood far away, shining against the deep-blue sky of this high altitude with the dazzle of new snow.

"That is Mt. Carstensz." She pointed at the white mountain. "In the Snow Range. Mr. Messenger went to the cockpit, when we sighted it. He'll show Vic where to land."

Dane had caught her sense of victory. He stood watching with a breathless expectation, while the plane climbed to fight the gusts of a windy pass above the cliffs, and skimmed low across new fields of equatorial snow, and wheeled down again over naked boulder slides and patches of sparse grass and lower slopes splashed red and yellow and white with rhododendrons. Something made him clutch her hand, when they saw the canyon.

It was a narrow gorge, cut back into the same dark basaltic formation they had seen below the pass. A glacial stream made a white plume of falling water at its head, plunging into a thin blue fleck of lake, and its foot was guarded by an enormous, solitary tree.

"That's it!" Nan pointed into the canyon. "I know it, from what Mr. Messenger has told me about it. It's the hiding place he found, when he first came to New Guinea to get away from men. It's ours, now."

The plane was diving between the cliffs, and he leaned anxiously to watch. He saw vertical rusty streaks washed down from iron deposits, and a wide black vein that shone with the dull luster of pitchblende, and a yellow patch that must be carnotite.

"That rock looks rich with minerals," His voice was hurried, husky with his wonder. "There are even signs of uranium. But I don't see any buildings."

She faced him, her eyes candidly probing. A frown drew troubled lines across her tawny forehead, but her quick smile erased them.

"Perhaps I shouldn't tell you, but I'm going to," she moved toward him impulsively. "After all, it's our secret. . . . Mr. Messenger has a space ship waiting."

Dane gasped. "A *space ship*—"

"We won't know how good it is until we try it, but it ought to be better than the rockets men are building, because it has atomic power—there *is* uranium in those cliffs."

"Atomic power? A space ship—" He shook his head, unbelievingly. "It would take hundreds of experts and millions and millions of dollars worth of equipment to build any sort of fission-driven space ship," he protested. "I didn't see any shops, or any signs of such a project."

"Mr. Messenger's the maker," she reminded him, gently. "He doesn't need

shops to make machines."

"How else—" Dane gulped, suddenly voiceless with an awed surmise. "You mean that he built a space ship by shifting genes? That he—*grew* it?"

HE TURNED abruptly back to the windows, looking for that enormous tree at the mouth of the gorge. All he saw now was dazzling snow and dark naked rock and the white billows of cumulus clouds building against the windward slopes far below. He couldn't find that tree, and he turned blankly back to Nan.

"It isn't so difficult to grow a machine as you might imagine," she said. "Most living things are a good deal more intricate, when you come to think of it, than most machines. Mr. Messenger says the space ship was an easier problem than you and I were. In fact, he once had me try one, just for practice."

"Was that—" Dane tried to swallow the dry croak in his throat. "Was that what Gellian showed me? A sort of half-metallic Christmas tree, growing out of lumps of iron and rock in a flower pot, with a toy ship hanging on it?"

She nodded. "My first mutation—except for a new virus or two. I made it last fall in New York. Mr. Messenger was trying to teach me how to mutate the mules, but they were still too difficult. I tried the space ship because he said it would be easier, and because I could already see we were going to need one, to get away from men."

"How did Gellian get it?"

"I left it for him," she said. "Because he was getting too bold. His men were killing too many bright children—human as well as mutant. He was coming too close to Mr. Messenger, with that map and all his other clues. My little Christmas gift unnerved them all, and helped me rescue several children."

A stern little smile crossed her face, when she spoke of that limited victory.

"Mr. Messenger was better at mutation than I am. His tree's a neater job. It's hollow—you saw how thick it is. The ship was grown inside the trunk—all the parts formed inside sheathing membranes which were later absorbed."

"And it's still hidden there?" Dane shivered with wonder. "How far—" he whispered. "How far will it carry us?"

"I don't know." Her voice was hushed, as if she shared his awe. "Mr. Messenger came back to look at it four years ago—he had left it growing here long before, when he went out to organize the company. He found it fully formed, with the matrix tissues already absorbed. He didn't try to fly it then, but he thinks it can reach Venus or Mars."

Dane stood silent before the prospect of exile to another planet, which would surely be stranger and more hostile even than New Guinea. He shivered again, under a sudden shadow of loneliness and unease, and he reached impulsively to touch Nan's hand.

"It's a desperate thing; I know." Her fingers clung to his, as if she sensed his dread. "But better than waiting for Gellian to kill us. Life on any other world would be hard at first, but we should be able to keep alive aboard the ship until we learn enough genetic engineering to grow a crop of mules—or something like them—to help us begin making a home for our people."

The idea of that bold project took hold of Dane, and it slowly changed his fear to excited eagerness. The colony would be a tiny outpost against the perilous unknown. The sun would be too hot or too cold, the gravity wrong, the air itself probably unbreathable. But Homo excellens would have a chance to survive, he thought, where the older race would die.

"We can do it!" He squeezed her hand, reassuringly. "If we can really learn mutation. Even if we meet unfriendly kinds of life, we ought to be immune to infections—and perhaps we could mutate the hostile species into useful ones."

"I think we can." Looking through the windows as if she saw something far beyond the dazzling peak of Mt. Car-

stensz, Nan smiled confidently. "I think we can build a new sanctuary—and then we must come back for the children."

"I've been wondering where you hid them," Dane said anxiously. "They aren't here?"

She shook her head. "It was hard to decide what to do about them. We were afraid to gather them here in New Guinea—or anywhere—for fear Gellian might get them all with one raid. I couldn't even tell them much of the truth, when I tried to warn them—too many of those in danger were human, and even the mutants weren't old enough to be sure of."

Worry cut frowning lines around her eyes.

"I told the parents that their gifted offspring had been selected for a long range experiment in human genetics. I warned them of deadly danger from a murderous opposition group. When they were skeptical, I gave them cash enough to convince them, and to help them guard and educate the children—those gifts helped break Mr. Messenger.

"Also, I saw each child alone. I promised that we would come back with more help, and taught each one a set of recognition signals so that he could tell whom to trust, and armed the ones who seemed responsible — with injectors loaded with the forgetfulness virus."

Dane was watching that frowning basalt wall, and he pointed suddenly.

"The tree!" he whispered. "Up yonder."

THE gorge was a sharp V of sky notched deep into the rim of that ragged black escarpment. The tree stood near the bottom point, looking no stranger than most New Guinea trees, deceptively small in the high distance.

"That canyon looks too narrow," he muttered uneasily. "And I'm afraid we're too low to reach it on this approach."

"Vic can fly us in, if anybody can."

Nan was smiling confidently, but her mention of Van Doon brought Dane a dazing crash of danger.

"Don't worry, Dane." She seemed to feel his alarm, and her fingers tightened in his own. "We'll soon be safe."

"I don't think so." Dane clung to her taut hand, and he searched her face, which had become a lifeless ivory mask beneath that glare of shocking jeopardy. He sensed the secret unease behind that effort to encourage him and herself, and he glimpsed the depths of her trust in him. Suddenly, he could talk to her about Van Doon.

"I'm afraid of Vic," he whispered. "I've tried hard to like him. But I can't trust him, even if he is another mutant."

"But he isn't—" Her voice stumbled, and he saw the dark terror dilating her eyes. "If he is," she whispered huskily, "he's one that went wrong."

"I've got a feeling—" He dropped her hand, and imperative purpose turned him. "I want to see what Van Doon's doing now!"

He ran to the compartment door, and she followed silently. Danger was a biting chill in the narrow passage through the crew's quarters. Its dusty bitterness took his breath and burned his tongue. It roared in his brain, louder than the engines.

He started up the narrow steps behind the cockpit, and paused when he could see Van Doon and Messenger. He reached back to check Nan, and touched his lips warningly. The aged maker sat slumped far down in the co-pilot's seat, but Van Doon was leaning forward, with the radio headphones over his ears, shouting into the microphone.

"Captain Vaughn to General Soames, Comopsur!" Dane caught the hoarse and frantic words, above the drone of the engines and that louder roaring of alarm. The term *Comopsur* puzzled him for an instant, until he recognized it as military shorthand for *Commander Operation Survival.*

"Get this!" Dane was stumbling desperately up the steps again, but he felt weak and sick with shock, and that harsh voice raced faster than he could

move. "Headquarters of not-men in canyon north of summit. Look for huge solitary tree below basalt cliffs. I'm crashing plane on rocky slope below, to mark spot for you—"

Dane felt half paralyzed. His dazed brain was grasping the enormity of this disaster. He could see a black tangle of fallen boulders ahead. He realized that the plane was already diving toward destruction, but his stunned body seemed too slow to do anything about it.

Moving in what seemed like the agonized slow motion of a nightmare, he came up the steps to the cockpit at last. He snatched the headset and microphone and hurled his body against Van Doon, fighting for the wheel.

He hauled it back, struggling to pull the plane out of that suicidal dive, but Van Doon pushed it down again instantly, with a monstrous strength. Rising half out of the seat, the spy lifted an improvised club; a hand fire extinguisher. Dane snatched at the heavy cylinder, but it slid out of his grasp, already slippery with blood.

"Mr. Messenger!" Nan had followed him up the steps, and her sudden scream knifed through his mind. "He's killed Mr. Messenger!"

XVI

DANE still felt trapped in that strange slow motion. When he reached again for Van Doon's weapon, the inertia of his limbs seemed to hold him back. The resistance was like some thick fluid

That nightmare feeling was only illusion, he knew. Desperation must have speeded up his mind to a pace that his body couldn't match, for all Van Doon's movements seemed as queerly deliberate as his own. He failed again to grasp that blood-stained club, but he had time to catch the hard bronze arm that held it. He ducked the blow, and twisted to drag Van Doon away from the controls.

"Take the wheel!" His shouted words to Nan seemed to come as slowly as his body moved, and he thought the diving plane would strike the rock-slide ahead before she could reach the Pilot's seat.

"Pull it back!" he yelled. "Quick!"

Her movements must have been faster than they seemed. She slipped into the seat with a surprising air of knowing what she was doing. Her feet found the rudder controls, and she swung the wheel as she brought it back, watching the instruments as well as that tumbled boulder-slope ahead. She was trying to turn the plane away from the cliffs above the slope, and for an instant Dane thought she would succeed.

Van Doon gave him no time to watch.

He had always known, without thinking much about it, that he was strong for his size. Without pausing to consider the odds, he had attacked Van Doon with high confidence.

If his strength was a gift of the maker's, however, their contest gave quick evidence that Van Doon was also a mutant. The spy was many pounds heavier, and equally in earnest. His brown arm twisted out of Dane's desperate fingers, like a massive lever of actual bronze. Again it rose and fell with the fire extinguisher, murderously swift.

Dane flung up his hand defensively, but the heavy brass cylinder crushed it down and struck his temple. The blow rocked him backward. Van Doon swung instantly, lifting that red club to strike at the back of Nan's head.

Dane was reeling and half blind with pain, but he swayed forward to clutch at the weapon. It slipped out of his fingers again but he caught Van Doon's elbow and hung on groggily. That feeble effort took all his will. He expected to be flung away, but something made the mutant spy relax.

Dully, he realized that Van Doon had stopped to wait for the crash. The nose of the plane was still coming up. That wilderness of fallen rock had begun to slip aside, as Nan tried to bank and turn before they struck. Abruptly there was blue sky ahead, instead of the cliffs. He thought they would avoid a crash—until the right wingtip struck.

He heard Nan's faint cry of despair, and then the shriek of tearing metal. Sharp pain stabbed his ears, as the air pressure went out of the cabin. He felt the sickening lurch of the lifting plane, and then he was hurled forward against Van Doon when it struck another boulder. They both were flung to the front of the cockpit. Something came against his head. . . .

Suddenly, then, everything was very quiet. The cockpit was tipped sharply downward, and he lay crumpled against the instruments. Van Doon's heavy body was sprawled across his legs, still curiously relaxed. He caught a bitter-almond whiff of potassium cyanide.

The agony of death paralyzed him, a shock of emotion more violent than the crash. For one dreadful instant he thought he had felt Nan dying, but then he knew that the death he sensed had been Van Doon's. As clearly as if she had spoken to him, he knew that Nan was still alive and not yet badly hurt.

Not yet—but the fuel would explode.

THAT sick fear swept over him—and then ebbed abruptly. Even before he had time to try to gather up his bruised and quivering limbs, the calm knowledge came to him that there would be no fire. Grateful to his mutant faculties for that assurance, he sank back to collect his strength and breath.

He managed to move a little, and found breath to speak.

"Nan!" he called faintly. "Can you answer?"

"I'm all right." Her shaken whisper came from close beside him. "I—I think I am."

He pushed Van Doon's inert body off his knees. Blood was oozing from the lax lips, and he saw fine shards of glass upon them. The mouth sagged open as the head turned, and that bitter odor was suddenly powerful. He turned away from it, to look for Nan.

She lay almost beside him, crushed against the great inert bulk of Messenger's body. Her lean cheeks were streaked with blood, but that must have come from the long ragged wound in the maker's scalp, for he saw no wound in her face. She smiled at him, with a shaken relief.

"I'm so glad—you're alive!" she sobbed. "Is Vic—"

"Dead," he told her. "I think from an ampule of prussic acid crushed in his teeth."

"He was faithful so long." A troubled wonder edged her shaken voice. "I can't quite believe he was against us all the time."

"But he must have been," Dane said. "I don't think he ever knew he wasn't human. His immunity from the virus protected his memory, and his mutant gifts made him an efficient spy. If you had been in time to find him, with the Sanderson Service, he might have been one of us."

She tried uncertainly to get up, but sank back to rub her bruises.

"Not one of us!" She shook her head, quickly. "Or he'd have realized what he was, long ago. He must have been one of those that turned out wrong." Her sick eyes went to the body at Dane's feet, and quickly fled. "I wonder why he took that poison?"

"An accident, I think," Dane said.

He could see how it must have happened. Sharing Gellian's fear of the mutants, the spy must have been prepared for torture. He must have had the poison capsule ready in his mouth, just now, to protect his secrets if he were captured, and the crash must have made him break it.

"I trusted him," Nan whispered. "I even liked him—I suppose he couldn't help showing a little more personality than the real lotus-eaters."

"Even now, I can almost admire him." Dane nodded reluctantly. "We were monstrous enemies, in his imagination. I don't see how he expected to survive his crash, even if his capsule hadn't killed him. He was willing to give his life to kill us—and it may turn out that he succeeded."

She tried to smile, through her tight-lipped apprehension. "Maybe nobody heard his call. You stopped him before he had time to say much."

"He told where we are," Dane muttered bleakly. "And anyhow that probably wasn't his first call—he must have been reporting our progress every time I got that danger-feeling."

"I guess you're right." Nodding hopelessly, she forgot to smile. "They let us lead them here. Now they'll soon be closing in, with their whole expedition, to finish us off."

"Which means we haven't much time." Dane glanced outside at the huge fallen boulders that walled the wreckage. "We must get out of here—if we can—before they spot us and drop a few sticks of bombs, just to make certain of us."

"How far is the tree?" A desperate hope came back to her eyes. "Do you think we can get there on foot?"

"We can try." He frowned doubtfully. "The going will be hard, at this altitude—up this rock-slide and then the cliffs. But perhaps there's a trail." He glanced at Messenger's crumpled body. "Or how did he go there?"

"In a helicopter."

Wincing from the pain of a dozen sprains and bruises of his own, he moved stiffly to help Nan rise from the tilted floor. She stooped to examine the wound in Messenger's scalp, which was still oozing blood.

"It seems so cruel," she whispered, "that he had to be killed by a creature he had made, when all he meant to do was good—" Her breath caught, and she bent lower. "He isn't dead!"

MESSENGER was alive, but little more. Breath fluttered his lips feebly as they straightened his body on the sloping floor, behind the seats, but it seemed a long time before he struggled to inhale again. Half open beneath the folds of flesh, his faded eyes stared dimly at nothing. The blotches were darker on his swollen face, and his lips already blue.

"There's a medical kit in his room," Nan whispered anxiously. "Or it was there, before we crashed. Gray plastic, with a chrome catch. Will you see if you can find it?"

Dane went back to look for it, scrambling clumsily up the incline of the tilted wreck. Light struck through a wide hole torn in the cabin wall where the galley had been, and he paused to look out uneasily.

Both wings had been sheared off, he saw, when the cabin came between two great boulders. The crumpled wings and the battered engines, ripped from their mounts, were all many yards away. He could see no danger of fire, but his relief at that was forgotten when he glanced up toward the tree.

The boulder-slope stretched up far above the wreck, a forbidding wilderness of broken stones sometimes as large as buildings. Above and beyond, the vertical face of the cliff raised another barrier. Standing in that narrow notch against the sky, the tree looked no larger than a thick-stemmed shrub.

Its promise of safety and escape was suddenly far away. Messenger would never be able to reach it, with all the aid they could give. The climb would be heartbreaking, even for him and Nan. And time was short—Gellian had studied another mutant tree, and he was unlikely to overlook this one.

Dane clambered heavily on through the wreckage. He found the medical kit on the floor of Messenger's room, and a metal canteen nearly full of water. He rolled them up in the blankets from the berth, and slid down with them to the cockpit.

The maker was still unconscious, breathing slowly and very feebly. Nan took the kit silently, to swab his flabby arm and stab it with a hypodermic needle. She felt his pulse and leaned to listen at his chest and finally shook her head.

"It doesn't seem to help," she said. "We must bring the ship down here."

"I'll try to get it," he said. "If you

can tell me something about how to operate it."

"I'll have to go," she told him. "Because the ship is—protected. I know how to get inside, and something about how to pilot it—when I was working last year on that mutant tree of my own, I apent months studying the plans and specifications Mr. Messenger had worked out for this one."

"It will be a terrible cimb," he protested uneasily. "Shouldn't we tackle it together?"

"I wish you'd stay," she whispered. "I'm afraid to leave him so long. He'll need another shot in about an hour—I'll show you what to do. Will you stay?"

He hesitated. The aircraft of Operation Survival would be here soon, he knew, and this wreckage was sure to get their first attention.

"You don't know him the way I do," Nan added softly. "I don't suppose you've learned to love him. But we both owe him a certain debt."

He looked down at the maker, fighting so feebly to breathe. For a moment he stood thinking of Cadmus and the green mules and the virus of forgetfulness, all designed to defend the new race. The debt was there, and he felt abruptly anxious to repay what he could.

"I'll stay," he agreed. "Just tell me what he needs."

She kissed him unexpectedly, and then opened the kit to show him what to do when Messenger's tired heart faltered again. In a few minutes she was ready to go. The cabin door had been crumpled and jammed, but he helped her through the ragged hole where the galley had been. She started away from him toward the jagged face of the first great boulder above, and turned back impulsively.

"I'm glad you're willing to stay." Tears shone in her eyes, and all the marks of fatigue and fear were erased from her brown face by a sudden tenderness. "I'm glad you understand."

He wanted to take her in his arms, but they had no time for that. A sharp emotion caught his throat, so that he couldn't even speak. He tried to smile, but his face felt stiff and numb. All he could do was to nod and lift his hand, with an awkward little gesture that seemed to say nothing.

"I'll come back," she whispered. "If I can—"

XVII

HE WATCHED her out of sight and went uneasily back to look after the injured maker. The cramped space where he lay was getting too warm, as the vertical sun heated the battered cabin, and Dane carried the blankets outside to make him a more comfortable bed on a flat ledge that was shaded by one of the twisted wings.

Messenger was still unconscious, breathing so feebly that his stubborn grip seemed about to slip from the outmost rim of life, and his great weight made him hard to move. Dane ripped a compartment door from outside the cabin to use for a stretcher, and slid him out of the wreckage upon it.

He seemed to breathe more easily in the cooler air outside, and he stirred suddenly while Dane was dressing the wound in his scalp. His trembling hand came up to touch the bandages, and his pale eyes opened again, seeing and sane.

"Well?" he gasped faintly. "What hit me?"

"Van Doon." Dane told him what had happened. "Nan ought to be back with that ship before night," he finished, with more confidence than he felt. "All we've got to do is just hold out till she comes."

"I'm hard to kill." Messenger grinned feebly. "People have been trying that for years." He lay silent while Dane fastened the bandage, and then asked for water. He lay back with his eyes closed for a long time afterward, as if exhausted. Dane bent to count his pulse at last, wondering if his heart was giving up.

"Not yet!" He pulled his wrist away with an unexpected vigor. "I'll tell you when I need another shot." He lay for a

while watching Dane with a kind of relaxed intentness. "So you and Nan are off to the stars?" he whispered at last. "Dane, what do you think of her?"

"I don't know," he began, but then some mute urgency in the maker's faded eyes made him want to be completely honest. "I do know!" he said impulsively. "She's just about perfect—there wasn't any error in the genes you made for her. I'm sorry for some of the things I used to think about her—when I believed she had killed Nicholas Venn. Because she's—wonderful! I believe we're in love."

"Puppy stuff!" A faint smile turned Messenger's weatherbeaten face fondly wise. "I think myself that I did all right with Nan, and well enough with you. I'm glad you like each other, though that is not surprising. But—love!"

He closed his eyes to rest again, while Dane waited uncertainly.

"You're children, yet," he went on at last. "Both of you—except in size. If you think you're capable of love—think about today again in another twenty years, or forty, after your mutant faculties are more mature. Then you'll know the meaning of love!"

He lay still again, as if worn out.

FROM the flat ledge where they waited, Dane could see the tree standing in that high, gorge. Restlessly, he kept searching the cliffs and boulder-fields below, but Nan was never in sight. He was afraid she had fallen again, but he tried to cover his gnawing apprehension when he saw Messenger's eyes upon him.

Messenger's puffy hand reached quivering across the blankets, to touch the naked black ledge. "This is where I die."

"Please!" Dane tried not to shiver. "Don't say that."

"One cell at a time, a few days or even a few weeks ahead," Messenger whispered calmly. "I can still do that, in spite of my stroke. I've been examining the future condition of my own brain cells. They all die today."

Dane straightened, impressed by his quiet certainty. "How long have you known?"

"Almost a month," he said. "I didn't tell Nan, but that's why I brought her out here in such haste and tried so hard to help mutate those mules." His faded eyes peered keenly up at Dane, not yet vanquished. "So you're wasting your time," he whispered. "Risking your life for nothing, waiting for Gellhan's planes to catch you here. Nan needs you, and you've done about all you can for me. Give me another shot if you like, and then get started."

"No, I'm not going." Dane began swabbing his arm for the needle. "I don't quite trust your forecast, and I promised Nan I'd stay," he said. "I'm going to."

The maker didn't seem to feel the needle. Afraid he was dying, Dane reached quickly to feel his pulse. It was hard to find, alarmingly faint and uncertain at first, but it seemed steadier and stronger as the injection took effect. His slow breathing became easier, and the deathly blue receded a little from his lips.

The maker lay unconscious, and time dragged away. The storm Dane had seen on the windward slopes must have continued to grow, for a scarf of high cloud moved over the sun and turned the air suddenly chill. He spread a blanket over Messenger, and stood up to watch once more for Nan until the tree itself began to fade and waver in his vision. He sat down to wait again, shivering in the cold wind rising.

The clouds were lowering and darker. Distant thunder began to mutter against the cliffs. At first he thought the storm was crossing the summits, but then the quiver of sound in the air became steadier and more alarming than any natural thunder.

It was the drone of aircraft.

"Well, Dane." Messenger was awake again, blinking at him sadly from the blankets on the ledge. "I'm sorry you didn't go, while you had a chance."

DANE turned, and the dark glare of peril led his eyes at once to the helicopter, floating down on quiet rotors out of that thunderous murmur of engines in the sky.

"Hide!" Messenger gasped behind him. "Maybe you can get away, yet."

But he had been seen. The air shuddered to a nearer blast of sound, as the helicopter checked its descent, and he could see machine guns in their turrets already moving to cover him. His empty hands clenched savagely, but the time for action had gone. He went slowly back to wait beside Messenger.

The helicopter circled them, keeping at a cautious distance. It was a heavy military craft, the closed cabin splashed with green-and-gray camouflage. He made out the insignia of the United States Air Force, half covered by the hastily painted black initials of Operation Survival.

The guns didn't fire. After two slow circuits of the wreckage, the helicopter rose a little, and firmly came back to perch on a boulder beyond the broken engines of the plane. Two airmen climbed down to the rock, and a third man in a business suit.

They scrambled down a little way across the torn metal and broken stone, and then paused uncertainly. The civilian began waving a white handkerchief, nervously. Dane beckoned them to come on, and then started uncomfortably when he recognized the man with the handkerchief—

John Gellian!

Gellian didn't look victorious. His eyes were hollowed, and his black-stubbled face was drawn thin with something deadlier than anxiety. He appeared as ill as the maker.

"Hullo, Belfast." He paused at the end of the ledge, nodding at the wary airmen behind him. "General Soames and Colonel Humboldt," he said. "General Soames is commander of Operation Survival."

The airmen nodded bleakly, and stood looking around them uneasily while Gellian came on to Dane. He was obviously the real commander, and Dane could see the general's stern disapproval of his unmilitary methods.

"We're looking for Captain Vaughn," he said.

"Your spy?" Dane nodded at the wreck. "You'll find him there."

"Dead?" Gellian's voice was hushed and hoarse. "You killed him."

"He broke a vial of cyanide in his teeth," Dane said. "Before he found out that he'd been fighting on the wrong side."

"You don't mean—" Gellian stepped backward, and shook his gaunt head incredulously. "He was our ablest agent."

"He was a mutant," Dane said. "That was the secret of his success. Men can't be immunized to Craven's disease."

"If that's true, he's well off dead." Gellian swung mistrustfully away from Dane, to stare down at Messenger. "So you're the maker?" His lips tightened with contemptuous hate. "I want to talk to you!"

"Better hurry, then." Messenger's bandaged head lifted feebly from the blankets. "I won't be talking long."

Gellian stalked toward Dane, his haggard face malevolent.

"We're in constant radio communication with the aircraft above." He nodded grimly at the helicopter, waiting with engines idling and machine guns trained on them. "If anything happens to us—or if anything breaks our radio contact—their orders are to saturate this whole area with H-bombs. Including the canyon above that tree. Keep that in mind, while you plan your mutant tricks."

Dane nodded, and promised helplessly, "There won't be any tricks."

Gellian swung nervously back to Messenger, who blinked at him calmly.

"Well, John?"

"I want some information," Gellian rasped. "About these things you've made."

"If you really want the truth—" Messenger lifted his trembling hands. "Help me up, so I can talk."

THEY took his arms and set him up against the rock behind the ledge. Dane wrapped the blankets back around him. He had to gasp for his breath, but his pale eyes blinked at Gellian with their old patient shrewdness.

"My staff officers wanted to order bombs away without any effort to negotiate with you." The gaunt man nodded impatiently at the general and the colonel, who had moved nearer to listen. "But Captain Vaughn's last report was interrupted, and I'm not satisfied with the visible target."

His savage eyes raked Dane again.

"Is the main colony of the not-men really located in that gorge?" he snapped at Messenger. "We can't find any installations—are they camouflaged?"

Messenger grinned feebly. "My chief regret is that I *wasn't* able to make mutants enough to people the fortified colony you're looking for."

"Don't lie to me! Where is it?"

"It doesn't exist—except in your sick imagination." Messenger shook his head, and strove to breathe again. "You have been waging war on an old man and a girl and a few defenseless children. I'm afraid you've just about finished us."

Gellian knotted a threatening fist. "I want the truth."

"I don't think so." The maker blinked innocently. "You wouldn't recognize it."

"Tell me where that girl is," Gellian rapped. "And where she hid those children. You can save yourself from a more severe interrogation." He glanced at his watch. "I'll give you five minutes to talk."

"Thank you, John," Messenger whispered. "I've a thing or two to say if I can find the breath—about your war on Homo excellens."

"Say it." Gellian's abrupt impatience was edged, Dane could tell, with physical pain. "Get to the point."

"I'm a biologist," the maker began heavily. "I've wanted for a long time to talk to you, John, about biology and tolerance—because I think you're honest. I believe you mean well. I've seen you show a degree of tolerance—I used to see people of all races working side by side in your offices." He sank back against the rock, and fought for air, and finally gasped, "Why draw the line at Homo excellens?"

"We're men." Gellian stiffened, his dark face haggard and stern with that inner agony. "Black or yellow or white, we're all men together. Your monsters have united us, and we're fighting for survival." His fevered eyes swept Dane warily, and came back to Messenger. "There's no use begging for tolerance, because we'd get none if your creatures had us at their mercy."

The maker shook his bandaged head, painfully.

"I think you could depend on justice," he whispered. "But I'm not begging for mercy. I want to call your attention to a scientific fact. I think your fear of Homo excellens is rooted in a misunderstanding of the Darwinian scheme of evolution."

"We aren't concerned with natural evolution," Gellian answered harshly. "We're simply struggling for existence, against your unnatural monsters."

"Darwin knew the role of co-operation," Messenger went on doggedly. "In *The Descent of Man*, he deplores the artificial barriers that keep our sympathies from extending to the men of all nations and races. But too many smaller individuals have twisted and perverted his views, to excuse or glorify rivalry and imperialism.

"Vicious little men are always quoting him to prove that nature's whole plan is war, but that is a wicked delusion. Combat and conquest, hatred and killing—they are the dramatic shadows that sometimes hide the great realities of love and mutual aid. Competition is a parasitic thing that can't exist until co-operation has created something for it to destroy."

Dane could feel the truth of that, but he could see that Gellian wasn't listening. The gaunt man had retreated a little toward the silent airmen, and he was

restlessly searching that cruel wilderness of broken stone, as if still alert for some treacherous attack.

"Look back to the beginning," the maker begged him huskily. "Life on Earth began with single cells. They lived in competition for the scanty means of survival on a sterile planet—but it was in co-operation that they united to evolve multicellular creatures, and so make survival far simpler."

"A billion years ago!" Gellian shrugged impatiently. "We're fighting to keep alive today."

"You're blindly destroying the very beings who could do the most to help you keep alive," Messenger whispered hoarsely. "The fact is that you're ignoring an important law of competition and co-operation."

Gellian peered at him skeptically.

"It runs against the law of the herd," Messenger gasped. "It proves the folly of herd-prejudice, and it lays down a scientific basis for tolerance. Here it is: the field of co-operation extends far beyond the range of competition, which is most bitter among things most alike."

"How's that?"

"I suppose the simplest example of the law in action is the savage competition of males of the same species for females with which they can live in co-operation—the mutual difference is what makes mutual aid both possible and vital."

He blinked earnestly at Gellian.

"Or take your own agency. You employ people of every race, and you must have found a great advantage in their wide range of backgrounds and abilities. Your best operative was Captain Vaughn. A mutant, most useful because he was most different."

Messenger collapsed against the rock, and gasped for air again, and went on stubbornly:

"Homo excellens can do as much for all the mother race as that spy did for you. The differences are great enough to place the mutant race almost outside the range of competition. Though those new traits and gifts may offend your herd instinct, they also widen the opportunities for mutual help.

"The mutants were designed to supply many of the things that our race lacks. They can balance the aggressiveness of men with a wider and finer kind of love. I believe they can save our quarrelsome old race from self-destruction, John—if you will only let them live!"

The maker's whisper was sharp with pleading.

"Can't you see the sanity of that?"

Restlessly, Gellian glanced at the lone tree in that distant gap, and peered suspiciously at Dane, and looked at his watch again.

"Time's up," he rapped at Messenger. "I still want to know where to find that girl and the children." He nodded ominously at the waiting helicopter, and gestured impatiently toward the muffled thunder in the sky. "Are you going to tell me?"

"I was hoping to." Messenger nodded his head feebly. "But I don't think you're following what I say."

"That's true." The gaunt man nodded quietly. "I'll tell you why." His drawn face looked stern, but his voice was oddly soft. "I'm dying of cancer—cancer of the liver."

"Oh!" Messenger's shallow breath caught. "I see."

"The doctors can't do anything for me," Gellian said. "Drugs don't help any more. Can you expect me to follow your scientific arguments—in that agony?"

"But it hasn't stopped your war on Homo excellens."

"If you're a biologist, you know what cancer is." A sudden ruthless violence shattered the quiet of his voice. "It is a colony of mutant cells—as deadly to the body as your mutants are to mankind. I can't do much about the cancer, but I can still eradicate your not-men!"

"I wish I had known sooner." The maker's faded eyes blinked regretfully. "Because I once had cancer, too. A malignant tumor of the brain." He glanced at Dane. "I told you how it destroyed

my skill at mutation. It had spread too far to be cut out, before I knew the trouble was anything more than old age."

"Huh?" Dane looked down at him abruptly. "Didn't you say you had it removed?"

"But not by surgery." His bandaged head turned painfully back to Gellhan. "That's a wonderful example of the mutual assistance I was talking about. I was beyond the medical aid of Homo sapiens, but Nan Sanderson saved my life."

THE haggard man moved toward him with a hungry intentness. "How?"

"She made a special virus," he whispered. "She rebuilt a common bacteriophage, to feed on cancer cells. That was her first successful mutation—done just in time to save my life."

"Bacterio—what?"

"'Fleas have smaller fleas to bite 'em—ad infinitum.'" The maker grinned wanly. "The bacteriophages are viruses that consume bacteria. Nan modified one of them, to give it an appetite for cancer cells and nothing else."

"And—did it work?"

"It works," Messenger said. "The pain is ended in a few minutes. Every malignant cell is killed and dissolved into harmless wastes which are quickly absorbed. Recovery is rapid, because there is no damage to healthy tissue."

"A wonderful thing!" Gellian breathed eagerly, but then he drew back suspiciously. "If it's such a perfect cure, why didn't you publish it?"

"You were pressing us a little too hard," the maker told him. "The medical profession is skeptical of such radical new treatments—with reason. Any announcement complete enough to win a hearing would have betrayed Homo excellens to you."

Gellhan peered at him sharply. "Do you think I'm that inhuman?"

"You've always seemed pretty implacable." Messenger blinked at him thoughtfully. "We were planning to give Nan's invention to the public, as soon as we safely could. If we had known that the pain of cancer was the root of your hatred, we might have offered it to you."

Gellhan straightened abruptly, his lean hands clenched. He wet his pale lips nervously, and glanced helplessly at the officers behind him. Dane could see the torment of indecision in his hollowed eyes, no doubt as cruel as his physical agony.

"I won't bargain," he muttered hoarsely. "I won't be stalled or duped. If all this is only one more of your cunning lies, you'll pay for it."

The maker turned feebly to Dane.

"Open the medicine kit. Show him the serum."

Dane fumbled in the plastic kit, and found a small carton marked *Cancerphage*. He opened it, to show six tiny glass ampules, packed carefully. Gellhan bent to peer at them, trembling with his hope and fear.

"Take the box," Messenger told him. "The serum should be injected into a vein. One shot is enough. You can prepare more serum from the blood of convalescent patients, taken about twenty-four hours after treatment."

Gellhan reached hungrily for the little carton, but checked himself to peer at Messenger fearfully.

"What do you want in return?"

"Nothing," the maker said. "If you're going to wipe out everything else I've tried to do, I want you to save the cancerphage. A gift from Homo excellens."

The gaunt man still hesitated, drawn taut in his torment of uncertainty.

"I don't trust you," his harsh voice rasped. "If this is all a scheme to infect our forces with your diabolical encephalitis—"

"Mr. Gellhan!" the general broke in. "I'd advise you to take the serum. We can arrange to have it tested. And I think we had better have a talk among ourselves—with Mr. Messenger's permission. Let's go back aboard."

Messenger piped and rattled again, with his laborious breathing. "If you're going to talk about peace," he gasped, "please remember that we have more to

offer than the cancerphage."

Gellian waited for his words with a restless impatience, but Dane saw an enormous interest in the eyes of the two officers.

"There are other diseases that ought to yield to mutant bacteriophages," Messenger went on painfully. "The process of genetic engineering can make the whole world over. Incidentally, Dr. Belfast and Miss Sanderson can help you protect society from any other imperfect mutants still alive—some of them are really dangerous!"

The general stood frowning at Messenger.

"We'll consider that," he promised uneasily. "We came to assault a fortress, and we're hardly prepared to make an alliance. You must give us time."

The three men hurried back across the wreckage to the helicopter.

XVIII

DANE laid Messenger back on the blankets, and felt for the uncertain flutter of his pulse, and hastily gave him another injection. It failed to take effect. His fight for air seemed hopeless, and his faint pulse began to skip. Dane started impulsively toward the helicopter, after aid.

"Don't!" he gasped. "Come—back!" His bandaged head rocked painfully from side to side on the blankets. "No matter. My work—all done!"

"I'm not sure." Dane tried to spur his weary will to live. "Gellian still seems pretty hostile."

"He's still sick," Messenger wheezed. "But he'll soon—be well."

"And so will you!" Dane bent to prop his head and shoulders higher on a folded blanket, to help him breathe.

He caught Dane's sleeve, with a sudden frantic strength.

"Listen—" He clung, fighting for breath, to go on. "Promise me—you and Nan—you won't forget—the muddling race—the stupid, noble race that made you."

"We won't forget," Dane whispered. "I promise."

"Thank you—both." His convulsive grasp drew Dane closer. "You can't do much—for me. But you can help—old Homo sap—"

The painful wheezing ceased, and the clutching hand let go. Dane caught it up to feel for the pulse again, but there was none. Stooping to straighten the body and draw the blanket over the sudden repose of that tired face, he felt crushed beneath a total desolation he couldn't understand.

Death was still a final fact, unchangeable even by genetic engineering. He felt a sick regret that he had failed to delay Messenger's foreseen fate. In these last hours, he had come to like and admire this stubborn old creator, yet he was surprised by that overwhelming weight of grief.

But I've known him longer. The sad words were Nan's, and he thought for a moment that she had come back. *I loved him more.*

Dane looked around eagerly, but all he could see was the helicopter with the machine guns still trained upon him, and the tilted waste of shattered basalt, and the high cliffs beneath the mutant tree. Something made him shiver.

"Nan?" he whispered sharply. "Are you—hurt?"

I'm terribly hurt, her words came back. *Because I wanted so much to keep him alive—until we could learn enough to make his body as young again as his mind always was. We needed him, Dane. You and I did, and those other mutant children he made. And the old race needed him, too.*

"But did you fall?" he gasped. "Are you injured?"

Only by his death, she answered. *I've come almost to the top of the cliff. Just above me is a cave that leads back to a hollow root of the tree. That is the way to the ship.*

He knew then that he was really picking up her thoughts, through their unfolding new capacities. She must have

perceived the maker's death with his senses, and that sudden overwhelming sadness was her own emotion, shared with him.

"I'm coming to you." He had been waiting too long; the need for action was suddenly imperative in him. "I can't do anything else for Mr. Messenger, and I believe I can get away through these boulders—"

No, you must wait, her warning thought checked his impulse to flight. *You must tell Gellian what we just promised, and arrange for us to begin. There's a great deal we must do for the maker and the mother race before we attempt any expedition to space, even if this new ship flies.*

"I'll wait," he agreed. "I'll talk to Gellian, if he wants to talk—but I'm afraid he wasn't very much moved by anything Mr. Messenger said. I'm afraid we'll have to run for it to save our lives. And work the way the maker did, to keep our promises. I think we'll need a base, somewhere off the Earth."

We'll see, she answered. *Now I'm going aboard the ship, if I can find that cave and pass those barriers. I want to study the controls, so that we'll be ready to launch it when we have a chance.*

The burden of her sorrow was lifted from him then, as their mental contact broke. He still felt the sharp pain of his own regret, but that was balanced now by the sure knowledge that Nan was safe.

Anxious hope awoke in him, when he saw a man returning from the helicopter. He started eagerly to meet him, expecting word from Gellian, but the man was only a perspiring sergeant, carrying a yellow-painted oxygen bottle with hose and valve and breathing mask.

"For Mr. Messenger," he said nervously. "General Soames sent me—"

He paused at sight of the blanket-wrapped body.

"You're a little late," Dane told him bleakly. "Tell the general Mr. Messenger is dead."

THE sergeant retreated in confusion, and Dane waited again. He paced the ledge until he was tired, and sat down to rest, and got up to walk the uneven rock again. He was afraid to watch the mutant tree, because the gunners were still watching him, but now and again he groped with his mind for Nan.

He failed to reach her. It must have been their shared grief for the maker, he decided, that created that momentary bridge between their minds. In time, as their new capacities unfolded, that communion of thought might draw them into a perfect oneness unknown to the older race, but now he could only worry and wait.

The engines of the helicopter had idled noisily for a long time, ready for flight, and it almost startled him when they were cut off. Listening in the sudden quiet, he could hear the dull drum of the unseen aircraft circling above.

That ominous sound seemed to rise and fall, for a time, but then it slowly died away, as if the planes were departing. His hopes lifted again, in that deeper silence, but for another endless time he saw no movement about the helicopter.

The clouds grew darker as the sun went down behind them, and he was shivering in a cold wind blowing from the snows above, when at last he saw John Gellian coming back. His heart sank when he saw the way the gaunt man stumbled over the rocks and scraps of wreckage. Hopelessly, he thought Gellian must have tried the cancerphage and been stricken by it.

"The maker's dead." He couldn't keep a tired defiance from his voice. "I guess you'll have to talk to me."

"The sergeant told us." Gellian paused beside the covered body, gray-faced and swaying. "It's a terrible thing, hounding such a man to death. If I had known the truth—but that's no use."

He shrugged, and turned soberly to Dane.

"There's one favor we want to ask." His voice was hoarse with weariness,

and hushed with a curious humility. "If you and Miss Sanderson don't object, we want to take the body. Do you mind?"

Dane hesitated, but he and Nan could do no more.

"I suppose not," he said.

"Thank you." Gellian's haggard eyes flashed with gratitude. "There's so little we can do, except to bury him."

He was swaying where he stood, but Dane saw now that he didn't look stricken. His face was lined with bone-deep fatigue, and his hollowed eyes dark with remorse, but that sternness of agony was gone.

"The cancerphage?" Dane asked quickly. "Have you done anything with that?"

"General Soames made me the guinea pig." He smiled a little, and his dark face had a look of peace Dane had not seen there before. "I think he was more impressed than I was, by Messenger's plea, and he pointed out that I had nothing to lose, whatever it did to me."

"What did it do?"

"It stopped the pain, as quickly as he promised." Gellian glanced sadly at the maker's body. "You wouldn't know how much that means. Just now I'm weak as a kitten—reaction, I suppose. But I expect to sleep tonight—without drugs—a thing I haven't done in months."

"I'm glad," Dane whispered. "I was afraid it had failed." He looked at the gaunt man, anxiously. "But what are you going to do about us?"

"I don't know." Worry erased Gellian's tired relief. "Soames and I have been talking with our people in the governments, trying to decide." He shrugged helplessly. "An appalling problem, because it caught us by surprise. I'm sorry we kept you waiting so long, but even yet we don't know what to do."

"What seems to be the trouble?"

"There's so little we *can* do." Gellian hesitated, studying him uncertainly. "And it's impossible to decide what we ought to offer, because so much depends on you. We can't settle anything, until we know what you are going to demand."

Dane caught his breath, astonished. "We aren't demanding anything."

"You're entitled to more than we can give," Gellian insisted urgently. "We can't do much for Messenger except bury him, but we want to do whatever we can for you—because of him."

"So you mean to let us live?" Dane's knees felt suddenly weak. "That's all we really need."

"I believe your lives are still in danger, but we're doing what we can." Gellian shook his head regretfully. "It will take a long time to uproot all the fear and hatred we've been planting. I know we can't undo all the damage, or bring any of those children back to life. But the witch-hunt is ended."

DANE felt the hot sting of tears in his eyes. He saw Gellian hesitating, as if doubtful of his reaction, but some-

[Turn page]

thing hurt his throat so that he couldn't speak of his relief.

"Operation Survival is being disbanded," Gellian went on softly. "Our planes are already returning to their bases, and the last of our forces will be out of New Guinea by tomorrow night."

Dane gave him a thin little smile of gratitude.

"Another thing—" Gellian paused again, uncertainly. "I don't know what you and Miss Sanderson are planning, but we're afraid for you to leave New Guinea, now."

Dane couldn't help a troubled glance toward the mutant tree. "I don't know where we're going."

"We're reversing the aims of our organization." Gellian went on nervously. "The new purpose of the agency will be to get justice for Homo excellens, but it won't be easy to tear down all the intolerance we've built. You will probably be in danger for a long time to come."

Dane shrugged, with a sudden cheerful confidence.

"If you give us half a chance, I think we'll get along."

"We've been talking about the company." Gellian frowned at him, doubtfully. "Mr. Messenger's company. I called Jones in New York—the banker. He has been a silent supporter of the agency, and now he has agreed to reorganize Cadmus—that is, if you and Miss Sanderson think you can make it pay again."

"I think we could." Dane nodded thoughtfully. "Nan will soon be able to make more mules, and other mutations, I'm sure. We'd want the benefits to be spread more widely than they were before. Whatever we do will be for both our races, instead of just for Mr. Jones. But I suppose we do need to make some money—for the children that are still alive."

"Good!" Gellian seemed relieved, though still uneasy. "Splendid! I'll tell him that you agree in principle. You can call him whenever you like, to work the details out."

His tired smile was suddenly too cordial, Dane thought, and his husky voice too loud. Even though the witch-hunt had ended, the chasm of difference remained. Man and not-man, they could be firm allies and warm friends, but never quite alike. Gellian's good intentions left him unmoved and still alone.

"I think that settles everything, in principle." Gellian reached quickly to grasp his hand, and quickly let it go, as if faintly uncomfortable in his presence. "Is there anything else?" He turned restlessly toward the helicopter. "Do you want us to take you back to Edentown?"

Dane shook his head.

"Please leave me here," he said. "Nan's waiting for me, and we've a way to travel. You can leave word that we'll soon be back again, to work on a new crop of mules."

The helicopter lifted a few minutes later, carrying the maker's body and Van Doon's. Dane watched it out of sight, shivering where he stood in the windy mountain dusk. As soon as it was gone, he started climbing eagerly toward the high black cliffs and the mystery of that mutant tree, glowing faintly blue against the sudden tropic dark, where Nan was waiting for him.

Coming in Next Month's Issue

COLLISION

A Novelet of a Space Satellite

By RAYMOND F. JONES

"There are probably minerals, though."

"Couldn't find anything worth while," I tell him. "I checked with instruments aboard the rocket. Didn't have much else to do."

"Hmm. Well, we'll have to look around anyway. Give the men a chance to stretch their legs. Besides that, we have to make out a report."

I motion toward the spaceship. "Captain, could I—"

"Of course. I'm sorry; I was so carried away by our finally arriving on Mars that I forgot you haven't had many conveniences these past four years. You'll want to wash up and—and—" He looks at me a little oddly. "And get into some fresh clothing. Stevens here can show you around, introduce you to the crew."

"Aren't you coming along, Captain?" Stevens wants to know.

"I want to look around a bit before the sun goes down, perhaps take a look at the other rocket."

"Better take the gun along."

"I don't think so." He turns to me. "You say there's no life around here?"

"None at all."

"I guess I'll live. You can show him around then, Jim. I'll be back in a little while."

With that he walks away toward the lifeless, crippled spaceship of the first expedition. Jim Stevens and I watch him for a moment, and then the man motions me up the ladder ahead of him.

WE CLIMB up the side of the glistening spaceship. The orange sun is creeping toward the horizon, and in the distance canal banks cast lengthening shadows across parched crevices. Above the opposite horizon, pinpoints of silver already penetrate space. In a few hours it will be dark again.

"Four years alone?"

"Hully gee."

"And no Martians?"

"This is Schultz, geologists," Stevens says, introducing me to the crew members. "McClusky, engineer. Austen, navigator. . . ."

There are seven in the entire crew, including Stevens and Captain Henderson. I shake hands briefly with the new ones, and Stevens rescues me from their questioning.

"Later, boys," he tells them. "Give the guy a chance to wash up first."

He guides me to a washroom and takes some fresh clothing from a locker and deposits it on a metal stool growing from the floor.

"Let me know if you need anything," he says, and then disappears.

I change my clothing hurriedly and go to a porthole to gaze out at the Martian landscape. The light is fading quickly, perceptibly. I can't see the other spaceship from here, but I wonder what strange things Captain Henderson will find there to excite his suspicions.

After a while I hear footsteps in the corridor, and Stevens comes in. "All set?" he asks.

"Feels good to have a few comforts," I tell him.

"Like to bunk, or would you rather look around?"

"I'd like to look around. This ship seems different from the other one."

"It is. A lot of new improvements. During those four years we were fighting to get enough money for a second rocket, the designers had time to make the thing more efficient, even less costly in some respects. Fortunately, that encouraged the taxpayers a lot. Here, I'll show you."

We walk down the corridor, chasing metallic echoes before us, and ascend a stairway that spirals into a room filled with instruments and control panels.

"Here's a plan of the ship," he tells me, pointing to a map on the wall. "Here's the new engine, the A-5, greatly improved over the one in your rocket. It's placed a little farther forward than usual, so—"

"Our engine was okay, but the air-conditioning unit got fouled up a few days after we were out," I tell him.

"We had a heck of a time with it."

Stevens smiles and proudly taps a unit illustrated on the wall map. "Not with this baby. Automatic, self-regulating—not a thing to worry about."

"When are you going to let Earth know you've arrived?"

"Midnight, E S T. They'll be wide open to receive us then. Just a brief message. 'Arrived safely. Having a wonderful time; wish you were here.' Something on that order. We can send in a more complete report later, when we have one."

I nod and look thoughtful. "Captain Henderson should be back by now, shouldn't he?"

"He'll be along. Henderson's a man you can't rush; he'll take his own sweet time about— That must be him now."

THE metallic clang of an airlock hovers in the air, and the captain appears, brushing a soft layer of red dust from his clothing.

"Find anything interesting, sir?" Stevens wants to know.

"Only eight skeletons," Henderson replies.

"Too bad about them," Stevens says sympathetically. "They—" Then he looks surprised. "*Eight* skeletons? But there were only eight in the crew."

"I know."

"There was a stowaway," I explain. "I don't know how he got aboard with all the security regulations, but he managed it. Some relative of one of the crew members, I guess, with stars in his eyes and a vacuum in his head."

The captain nods. "I thought it might be something like that."

"Are we going out, Cap?" Stevens asks, eyes alight with eagerness.

"Getting too dark," Captain Henderson says, shaking his head. "Won't be able to see much with artificial light. We'll start out early tomorrow, after a good night's sleep." He turns to me. "How'd you like to guide us around, seeing you're the expert in the crowd."

"Okay. But I warn you, you'll be disappointed."

"You said something about ruins?"

"The nearest pile is about a mile from here. That's where I've been staying these four years."

"Good. We'll take a look at it in the morning. Meanwhile, I suggest you get some shut-eye. Stevens and I'll let Earth know that neither expedition was a total loss."

"Guess I could use a little sleep in a bed for a change."

"I'll show you to your bunk," Stevens tells me.

He leads me through narrow, metal-raftered passageways into a room with several sets of double-layered bunks sprouting from its walls.

"Take your choice," Stevens tells me, smiling. "One's just as hard as the next."

"At least it'll be an improvement."

Alone, I stretch out on a lower bunk and contemplate the slow-moving hands of a clock set into the opposite wall. Eleven o'clock. It is eleven o'clock, E.S.T., on Earth, and it is eleven o'clock on this spaceship, which is a part of Earth.

At twelve Captain Henderson will be at the radio, calling Earth. At midnight, the people of Earth will know that space travel to Mars is feasible, and the rush will be on. Smelling uranium and the exploitation of that mineral and other resources offered by this planet, they will mass-produce space rockets, and in a few short months an Earth civilization will mushroom from the Martian desert.

I hear footsteps. Quickly I close my eyes, pretending sleep, for I have no desire to talk, to answer questions. I have no time. Men come into the room.

"Boy, wait'll the girls hear about this."

"Yeah, we'll be real heroes, won't we?"

Bunks flatten around me.

"Careful, we don't wanta wake up Sleeping Beauty."

"Isaac here? He's dead. After four years out there, he deserves a little rest.

Hope we don't stay here four years."

"I have the feeling the novelty would wear off long before then."

They start undressing. I hear the swish of clothing.

"Probably won't be much over a month or so. Once Cap Henderson gets his message sent, things'll start popping."

"You guys shut up, will ya? We gotta get up early tomorrow."

I hear the creak of men tossing in bunks.

"Okay, okay, your highness. Don't blow a fuse."

Silence. I had counted four separate and distinct voices. That means that, besides Henderson and Stevens in the control room, there is one other man someplace in the ship.

I open my eyes. All is in darkness, except for two luminous clock hands indicating eleven fifteen.

"John Newton," I tell myself, "you have exactly forty-five minutes."

PATIENTLY I wait in the darkness, watching, as I had waited and watched those four years on the desert outside. From one end of the room there is a flare as match and cigarette are joined by a restless hand. I watch the glow travel with infinite slowness, eating the tobacco. I watch it as I had watched the stars those cool breeze-swept nights. I watch as the glow is snuffed out, expertly, finally, and the man turns over in his bunk, preparing to sleep.

I wait and I watch and I listen. Someone at the opposite end of the room is snoring softly, and from the bunk above comes heavy breathing. Otherwise there is no sound.

Carefully, quietly, I swing my feet from the bunk. No one stirs. I glance at the luminous dial of the clock. Eleven thirty.

I make my way through the darkness and step out into the corridor, now dimly lit. Remembering the map Stevens has shown me, I confidently walk down the passageway and descend a curving stairway to a lower level. The stairway ends before a doorway, through which pours bright light and the sound of someone working. I walk into the room, and the man whirls around, startled, a monkey wrench in his hand.

"Oh, it's you," he says, relieved.

I smile. "Were you expecting Martians?"

"Well, to tell the truth—"

"Captain Henderson wants you to check the air-conditioning unit," I tell him. "The air seems to be getting stale up there."

"Stale?" His nose wrinkles, testing. "Seems to be okay here." He puts the monkey wrench on a stool and consults some gauges on a mechanism labeled "Conditioning Unit."

"That's odd," he says. "Everything seems to be—" He collapses, as his skull makes a sudden cracking sound beneath the wrench in my hand. He sprawls to the floor, his head bleeding.

I look up at the clock. "Twenty minutes, John Newton. Better hurry."

I do hurry. I take a small vial from my clothing and empty it into chemicals in the air-conditioning machine. And then I leave, ascend the stairs, go down another passageway past the room where four men sleep but will never awaken, and up another stairway to the control room.

I hear voices. I flatten against the wall, and I wait and listen, as light streams through the doorway, casting two shadows.

"But—but that's crazy," Stevens is saying.

"Maybe it is," Captain Henderson returns, "but there *is* the possibility. Oh, I don't know, Jim. Maybe it's just my imagination."

"But Newton a Martian! It's—"

"Incredible. I know. But there are a lot of things that seem awfully fishy. His explanation of those eight skeletons, for example; a mouse couldn't have gotten on board that ship without permission. Besides, an Earthman wouldn't

have left their bodies like that; he'd have buried them."

"Maybe he was too busy trying to live himself."

"That's another thing. He seems remarkably well-fed for a man who's been living on a barren Martian desert. Okay, maybe he's been eating supervitamined herbs or something. But I would expect a man to look at least a little haggard. Newton's hair was neat—too neat. He didn't even need a shave."

"Maybe the climate, or the air," Stevens suggests weakly.

"Sure, you can invent reasons for it. I hope you're right. I'm just considering the possibility before it's too late."

"Too late for what?"

"I wish I knew. If Newton is a Martian, there must be a reason he wants us to think he's not."

"But what reason could he have?"

"Maybe he wants to go to Earth—I don't know. Maybe he's a spy sent to look us over and make sure our intentions are friendly. Maybe I'm all wet, too."

"Still," Stevens' voice is a whisper, "it does seem a little odd now that he'd be right there by the rocket, waiting for us."

"As if he'd been expecting us. It could be coincidence, but it doesn't seem likely. I went through the rocket out there. Nothing's been salvaged, not the smallest thing that could comfort a surviving Earthman. It just crashed—if it did crash—and was left to rust."

"My God, Captain, suppose you're right. He's—he's sleeping down there with the men."

"Maybe I'm wrong about this, but I can't help thinking something's screwy someplace. It's more than just plain facts, but I don't know what. Call it intuition, if you like, the name doesn't matter. Anyway, we'll probably find out soon enough. That's why I want him with us out there tomorrow; I don't trust him in the ship, and we might be able to use him as a hostage."

"YOU'RE off the beam, Captain Henderson." They look up, surprised, as I step out of the shadows and into the control room. "My name's John Newton, and I'm an Earthman."

"What are you doing here," Henderson says angrily.

"Eavesdropping, of course. I heard your little explanation."

"You did, did you? And what did you think of it?"

"Utterly fascinating."

"But do you deny it?"

"Denying it would be much too simple. Use your head, Captain. If I could simulate everything about an Earthman—his body, his features, his language, even his manner of expression—don't you suppose I could easily take care of your slight objections?"

"You could, if you knew about them."

"What?"

"Let's assume, for a moment, that you are a Martian, and for some reason, as yet unclear, you wish to disguise yourself as one of us. I don't know, of course, how you'd do it, but you'd probably have some method of tapping a person's information."

"Probably."

"Suppose the first ship did crash. Maybe there were only one or two survivors, and maybe you had to work fast to pump them of information before they died. Maybe you had only enough time to learn the essentials necessary to your disguise—the language, even to colloquialisms, and perhaps a few basic customs. But perhaps there were some things you didn't have time to learn."

"Such as?"

"That Earthmen are plagued with hair that grows on their faces and their heads, for example."

"If I were a Martian, why would I desire this knowledge?"

"I don't know, for sure. Maybe you resent our coming to your planet. Maybe you think we'd exploit you."

"Wouldn't you?"

"Probably. And you'd naturally want to discourage colonization."

"So by telepathy wa learn thesa things and send one of our number in disguise to toss a monkey wrench into tbe works of any new spaceship that comes?"

"Right." Captaln Henderson's eyes narrow. "Except I said nothing about telepathy. That was your contribution."

"Wouldn't you feel awfully ridiculous, Captain, if you found you were wrong?"

"Am I wrong? Are you a Martian?"

"No, Captain, I'm not a Martian. Disappointed?"

"Boy," Stevens says, relieved, "I'm glad to hear that."

"Cap!" Tbere is panic in Stevens' voice. He clutches his throat suddenly. "Captain Henderson, sir, the air!"

"What?" The Captain whirls to a panelboard. "There's nothing wrong with the—" He chokes sud enly. "Nothing wrong with—"

Slowly, quietly, tbe is bas permeated the spaceship, traveling invisibly through its metal lungs, snuffing out lives along the way. It comes with an unnoticed casualness, filling rooms slowly, completely, and then gathering itself, strikes, and men come awake gasping and fall lifeless on their bunks.

IN THE control room Stevens has fallen to the floor, and Captain Henderson staggers erect, his eyes accusing even while life shortens. Frantically, he fumbles at a drawer set beneath a control panel, pulls a pistol from it; he fights to steady tbe weapon. I watch, uninterested, as his finger jerks ths trigger.

There's an explosion; the sound of a bullet hitting my stomach; tbe dying Earthman's surprise at the sudden inefficiency of his weapon; the pistol clattering to the floor.

"You are. You are!"

"No, Captain, I am not a Martian."

There is bewilderment in Captain Henderson's eyes, and then be crashes forward and falls lifeless across the body of the other Earthman. I step over them, and go from the room.

From behind me comes a loudspeaker's voice, crackled and hoarse:

"Earth calling Second Mars Expedition. Earth calling Second Mars Expedition. Come in. Over."

A pause.

"Earth calllng—"

I open the airlock and descend into the black velvet of the Martian night. The sand seems soft and comfortable after tbe hard, alien metal of the Earth ship.

A volce comes in my mind. "Is it done?"

"It is done," I answer.

I walk across the sand to the crashed rocket, and two moons cast twin shadows before me. I take my place besida the wrecked spaceship and stand and watch as Martians, their antennae furious with directions, crawl from behind dunes and scurry on six brittle legs to the Second Mars Expedition. They crawl to the ship, around it, over it; and a moment later they burry away and take up positions of shelter.

There is a flash of light, a roar to awaken a sleeping planet, and the space ship and its crew become drifting splinters of metal and flesh.

The Martians watch in satisfaction, and then they leave. "The android has done well," they think, and all agree. "He has done very well."

I listen with pride, and my synthetic mind glows at the words of praise bestowed upon me by my creators. Then the Martians are absorbed hy tbe night and I am alone beside the broken rocket ship, where I stand and watch the velvet sky for a flash of silver, a roar of jets. I wait patiently and watch the stars shift silently across the still heavens.

"My name is John Newton," I tell myself. "I am an Earthman. . . ."

READ FANTASTIC STORY MAGAZINE—NOW ON SALE, 25c AT ALL STANDS!

SKIN DEEP

BY TARR ROMAN

The cosmetic drummer tried to make life lovely on Dveeri

"NOW, there you are," said Ford S. Barton. He leaned back to survey his work. It was horrible, he decided. Absolutely and completely horrible. He smiled professionally.

"Don't you just *feel* more beautiful," he purred. "Why, I'll bet those cosmetics give you a new lease on life. I'll tell you, you look a thousand times better."

The Dveeri female stared fixedly into the mirror. "Kweep?" she said. Her split tongue forked out between her fangs and darted over her thick lips.

"Zhickel purp," she muttered, revolving her eyestalks toward the Earthman.

"That's right, it's wonderful," beamed Barton. "Makes you look like a new . . . uh . . . woman."

"My mate iss puzzled," said her husband, speaking as if he had a hair brush in his wide mouth. "You zay these cozmetics make her more beautiful?"

"That's right," said Barton, tearing his eyes from the alien female's face. "Why, a little lipstick and rouge can do wonders to a girl's appearance. Remember how pale your wife was? Well, look at her now. Just look at her. That sallow, green complexion is gone. No more blemishes or moles. Believe me, you've got a gorgeous woman on your hands now."

The Dveeri male looked at his mate. The female was still admiring herself in the mirror and licking her lips. From time to time, she exploded air from her head vents and waved her two antennae

in circles. Her long, tentacular fingers kept flitting over her reptilian face. Finally, she turned to her husband and barked out a string of syllables in their native tongue.

Barton stopped listening. He couldn't understand it and, anyhow, he knew when he had a prospect hooked. He congratulated himself on another big sale and began adding up his profits since he'd come to the planet.

There's nothing like getting in on the ground floor, he thought. And all it takes is a little imagination and sales ability. Who would have thought that such a large market for Earth cosmetics existed on this godforsaken swamp of a planet a thousand light years from nowhere? Ford S. Barton, that's who. He smiled inwardly. Just because these people happened to look like upright alligators was no reason to think that you couldn't sell them cosmetics. They were intelligent, weren't they? Well, not too intelligent, but intelligent *enough*. And any halfway intelligent race had more or less the same appetites when you got right down to it.

HERETOFORE, Barton had stuck mostly to the planets inhabited by humanoids. Remarkably few races had developed cosmetics and the market had been big. But as the alien peoples began to manufacture their own, business had dropped. Only a short time ago, in fact, Barton had just about decided to get a different line.

Then had come the grand idea. So simple, and yet, so profitable. Why not extend operations to the non-humanoids? There was no reason why they wouldn't want to improve a bit on nature like everybody else. Of course, the products were designed for humanoids. And Terrestrials at that. But that was no obstacle. Other creatures wouldn't know it. And females were females wherever you went.

He'd tried it. First on a small scale with the near humanoids. And later with any intelligent race he could lay his hands on. The sales were phenomenal. In a month, the home office was behind on deliveries. In three months, he had smashed all records. In six months more, if his luck held, he'd be up for a vice presidency in the company.

Operations here had gone as usual. He'd come in, a terrestrial week ago, unloaded his stock, and circulated about the small town, giving his pitch. The Dveeri were still in their early iron age phase of civilization and had only seen a few interplanetary visitors. The next step would be to set up a district sales office with adequate communication equipment, and staff it with natives. After a few weeks of training, they'd be able to handle the branch themselves and Barton would blast off for another planet. It was all so easy.

"I want to buy a box of those," said the Dveeri male, pointing at the lipstick.

"Lipstick? Sure," smiled Barton, coming out of his daydream. He reached into the case and brought out a package.

"Here you are, Nebula Mist," Barton said. "The best I've got."

The Dveeri passed over some metal coins and the sale was made. Barton pocketed the money and closed up his kit. The odd coins could be turned into the InterGalactic Bank and exchanged for Earth money. That service and Cosmopolitan, the galactic trade language, had been introduced to this world by the first extra-planetary visitors.

"Tell your friends about me," said Barton, in parting. "Maybe they'll want some cosmetics too. I'm stopping in town."

He smiled and walked over to his small gyro. It had been a good day. His products were fairly well distributed over this area; in fact, over most of the habitable portions of the planet. He decided to go back to town and get some rest. Tomorrow, he'd begin organizing the branch office. He sighed wearily as he climbed into the gyro. It had been hard work, but profitable.

He was wakened during the night by a vicious knocking on the door of his

room. Sleepily, he felt under the pillow for his blaster. You never could tell on these wild, backward worlds. Then, gun in hand, he opened the door.

Standing outside were two huge Dveeri males. As soon as the door was opened, they pushed in. Barton backed against the wall, fingering the butt of his blaster.

"What do you want, boys?"

The Dveeri grinned horribly, revealing their long, hooked fangs. Then, one of them pulled a kind of slate out of his pouch.

"Sizks cases lipstick; four big boxes rouzh; all you got powder; twenty big jars cold cream. And twenty-five bottles lotion. Herezh money."

Barton exhaled in relief. "Sure, boys. I don't know if I've got that much stuff here. But I'll look."

The transaction was made quickly. After the Dveeri had gone, Barton wondered briefly just how the news had spread so fast. But these aliens were just like kids, he decided. Couldn't wait for morning to get the presents. He sighed and went back to bed.

The next day he spent recruiting a staff for the branch office. Good employees were usually hard to find on alien planets. But wherever he'd gone, he'd found them. Money was an inducement to any intelligent race. And, by evening, he had assembled enough Dveeri for the branch and begun to freight in communications equipment from his spaceship.

By evening, the job was finished. He'd set up the plastic building, installed his equipment, and sent his staff off with instructions to return in the morning. He was tired and decided to get some sleep. The tough work of training would begin the next day.

But waiting in his room were the same two Dveeri he'd seen the night before. Barton darted a glance around to see if anything was missing before he greeted them.

"Hello, boys. Back for some more cosmetics? I've got—"

"We are come to bring you away," hissed one, grinning.

BARTON gave a start and looked around for his blaster. He'd left it in the gyro. He smiled, nervously.

"Where do you want to take me?"

"We give you big dinner. Big celebration to great man. You do much for us. You brought the cosmetics. Very good. We give you dinner."

Barton relaxed slowly. These guys were harmless as kittens. He must be getting jumpy. So they wanted to give him a dinner for services rendered. Fine. It would be good advertisement for his products. Why not? He decided to go along.

"All right, fellows. I accept your invitation with pleasure. Let's go."

The two Dveeri grinned more widely and escorted him out. He wanted to take his gyro but they wouldn't hear of it.

After an hour's walk through the fields, they came to a kind of outdoor picnic grounds with tables and chairs spread beneath the trees. A huge fire made the shadows dance and bounced red light off the gleaming skins of the Dveeri, making them look like fiends of hell. Barton swallowed his anxieties and walked forward.

The noise died down as he approached and reptilian heads turned to stare. Barton's escorts shepherded him toward the largest table near the fire. He sat down and shakily waved his hand.

"Hello, boys. Having a party?"

A huge Dveeri male, the color of decaying bread, rose and began to talk in the native tongue, pointing frequently at the Earthman. Finally, he stopped and turned to Barton with a broad grin.

"We are happy you are here," he gurgled. "You bring us many good things. I tell my people you are great person."

"Well, thank you," said Barton. "I'm glad to be here." He was beginning to lose his fear. The party looked for all the world like a political picnic back home. He wouldn't have been surprised

if somebody started organizing a softball game.

"Now, eat," invited the Dveeri chief. "Many good things to eat. Enjoy yourself."

Barton glanced at the table for the first time. He blinked his eyes. It was a bit difficult to distinguish objects in the bad light but the food looked much too familiar.

"Uh . . . you are bringing food?" he asked, nervously.

"Here is food," barked the chief. He reached forward and picked up a box. Carefully, he stripped off the paper and unscrewed the container. Then he took a big bite and chewed noisily.

"Lipstick," he grunted, happily. "Very good to eat. Sweet and tasty. Have some."

"You mean you eat the stuff?" asked Barton, incredulously. "But—"

"Naturally eat the stuff. That what it's for. Also, cold cream, powder, rouge. Nail polish not so good. Eat!"

"But you're not supposed to eat it," cried Barton. "You're supposed to put it on. I—"

He stopped as he noticed the alien chief staring at him. He thought he saw an expression of menace in the glassy eyes. The others too had stopped eating and were looking at him queerly. A few crossbows had appeared in the crowd.

"There something wrong with the food?" asked the chief, suspiciously. "Slow poison, maybe? Works later?"

"Uh—no. No," stammered Barton. "It's not poison. It's pure stuff. But—"

"Not poison then why not eat?" said the Dveeri.

Barton darted a glance around. The aliens with the crossbows had moved in closer. One word from the chief and he would be drilled with a dozen shafts from the primitive weapons. They could kill him just as dead as a blaster.

He shot a look at the chief. The reptile was still staring suspciously at him. Almost imperceptibly he had begun to move back from Barton. The Earthman knew what that meant. He was getting out of the line of fire. He had a few more seconds.

With an anguished gulp, the Earthman made his decision. He turned to the table and picked up a lipstick. He took a big bite and began to chew voraciously.

"Not bad," he commented between bites. "Pass me a little of that cold cream, will you?"

FEATURED NEXT MONTH

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PASSPORT TO PAX

A Novel of Galactic Adventure

By KENDELL FOSTER CROSSEN

AND MANY OTHER STORIES!

I

NOLAND BANNISTER, superintendent of Star Control Field Office #12, was known at the spaceport and along Folger Avenue as a hell-roarer---a loud-voiced man of vigorous action. He made no secret of his dislike for administrative detail and attacked paper work with a grumbling rancor. Negligence in his staff he dealt with rudely. Mistakes of a more serious nature left him grim and white with rage.

It was Robert Smith's misfortune to commit the most striking blunder of Bannister's long and varied experience.

As usual, at four o'clock Friday afternoon Bannister sat in his office reviewing the week's work: ships cleared for passage, ships inspected and cleared for discharge of cargo, contraband seizures, crews screened for hijackers and known performers. Last he inspected a *précis* from the logs of ships which had surfaced during the week; skimming for information of possible economic or scientific value.

Smith Was Shanghaied Into an Awesome World

SABOTAGE

ON SULFUR PLANET

A Novelet by JACK VANCE

Near the end of the *précis* he found an informal note:

"Re SpS *Messeraria* Supercargo very drunk when ship's log was taken Followed me back to the office rambling about planet inhabited by intelligent life-forms (obvious fabrication) Tossed him out of office on ear. Smith"

Bannister blinked in amazement, stiffened in his chair. He switched the film back to the *Messeraria's* log, examined it with flinty attention. It appeared ordinary enough, although Captain Plum's reputation offered no surety against falsification. He checked the ship's roster against a master index.

Jack Fetch, mate. One-time member of the Violet Ray Association. Never convicted.

Abe McPhee, chief steward. Moral deviant, refused deabberation

Owen Phelps, quartermaster. Expert gambler and game-rigger.

Don Lowell, supercargo. Known embezzler; a brother refused to prosecute.

"Mmmph," said Bannister to himself.

Where He Found His Personal Dream of Terror!

"Nice bunch." He continued. First and second engineers, wiper, mess boy. Pasts stained to a greater or lesser degree.

BANNISTER re-read Smith's breezy message. Anger rose in his throat like the aftertaste of cheap whisky. Suppose Supercargo Don Lowell had been drunkenly babbling the truth? He punched a button on his desk.

"Yes, Mr. Bannister?"

"Who the devil is Smith? There's a report here—just a few casual lines—signed 'Smith'. Who the devil's Smith?"

"That'll be Robert Smith. A front-office man we hired last week."

Bannister said in a metallic voice, "I want to see him."

There was a wait of five minutes, while Bannister drummed his fingers on the desk. Then the door slid back a few inches, remained in this position, revealing a hand on the latch, while the owner exchanged a bit of final banter with Bannister's secretary.

Bannister barked, "Come in, come in!" He glared at the young man, still grinning, who swung the door open.

"Smith?" Bannister spoke with steely gentleness.

"Yes, sir."

"Can you guess why I want to see you?"

Smith raised his eyebrows. "Not unless it's about the suggestion I made the other day to the office manager."

"A suggestion? Well, well," said Bannister, catlike. "How long have you been with us now?"

"About a week. I'm not complaining—don't get me wrong. I just think the work I'm doing could be handled more efficiently by machine."

"What are your duties, Smith?"

"Well, I've been collating reports, reviewing similar information in Central Intelligence Bank, and appending or amending. If we had a scanner machine to grade and append the material automatically, I'd be free to tackle more important duties."

Bannister inspected Smith under lowered eyebrows. "Interesting. What do you imagine to be the price of the machine you visualize, Smith?"

Smith frowned. "I'm really not sure. That's out of my line. Twenty or thirty thousand, I suppose."

"Who would service the machine, who would code the material?"

Smith smiled at the question. "A cyberneticist, naturally."

Bannister looked toward the ceiling. "And what, I wonder, is the salary such a technical expert commands?"

Smith likewise raised his eyes in calculation. "Perhaps five or six hundred. Seven hundred possibly for a good man. You'd want the best."

"And how much are we paying you for performing identical work?"

"Well—three hundred."

"Are there any conclusions to be drawn?"

Robert Smith said candidly, "It must be that I'm worth seven hundred dollars a month to the bureau."

Bannister cleared his throat, but managed to continue in the same gentle voice. "May I direct your attention to the matter on the screen?"

"Oh, certainly." Smith swung his gaze to the three lines of neat type script. He nodded. "I remember the man very well. In terrible shape, dead drunk. Vicious stuff, alcohol." And he confided, "I myself don't drink; it rots the brain."

Bannister was fond of whisky and beer. Once more he cleared his throat. "What exactly did this man say to you?"

Smith settled himself into Bannister's most comfortable chair, stretched out his legs. "He was clearly subject to delusions and also victim of a well established persecution complex. Assured me the captain and mate of his ship were intent on his death."

"Did he mention why he was in danger?"

Smith laughed easily. "Typical paranoia. A man in bad shape. He claimed that the *Messeraria* had landed on a

unknown planet and discovered an intelligent race of beings. He made a full account in his diary—so he insisted—but the captain tore it up and obliterated passages in the ship's log."

Bannister nodded sagely. "And why did all this take place?"

"He said something about—" Smith knit his brows— "I believe it was jewels. Rather trite." He chuckled. "He could at least have given us something bizarre for our trouble—energy from the air, a paradise of beautiful women, clairvoyant dragons. But no—just jewels."

Bannister nodded. "Drunk, eh?"

"Drunk as a lord."

"Crazy to boot?"

"Well, Mr. Bannister, you've heard his story. You can judge for yourself."

Bannister's fury and contempt had taken him past the stage of invective. He said in a sibilant voice, "Smith, you're a remarkable man."

Smith looked up in surprise. "Why, thank you, sir."

"A museum piece. A man with a head full of corn cobs."

Smith stared in confusion.

"We've been exploring space a hundred and fifty years," Bannister intoned. "We've found hot worlds and cold worlds, big ones and little ones. We've found dead planets and planets swarming with life, there've been insects and fish and lizards and dinosaurs and god-awful things you'd hate to see under a microscope. But never—not once, Smith—has there been the report of an intelligent race, a civilized people."

Smith nodded. "That's why I was quick to see through the man."

"You ineffable damn fool," roared Bannister, "you pitch out a man who claims first-hand information, and meanwhile you have the brass to sit here grinning like a cuckoo! Where's your conscience? You feel no twinge when you accept your salary?"

"Well," said Smith hesitantly, "it still seems to me that you're grasping at straws. I sized this man up when I first picked up the log book. I'm an excellent judge of character, Mr. Bannister. I can usually predict a man's actions fairly well."

"Ah," said Bannister. "Then in that case perhaps you can predict my next sentence?"

Smith looked worried. "Is it 'You're fired'?"

"Right. You're fired."

Smith said in a weak voice, "I told you I was good at it."

The Spoilers

IF AND when Man gets around to other planets will his purpose be to build—or to loot? The Bradbury saga has been a rueful indictment of man's greedy blundering—well meant or otherwise. But there is no blundering in SABOTAGE ON SULFUR PLANET, here Jack Vance writes the swift and deadly story of a ship's crew who were bloody buccaneers, who lived for spoils and respected no lives but their own.

Evolution is a slow process—we wonder if mankind will have changed much from the likes of Drake and Kidd by the time space travel is here?

—The Editor

ALL was not lost, thought Smith as he walked along Folger Avenue toward the space-port. If he were able to confront Bannister with the supercargo, Bannister could see for himself how completely addled was the man. No doubt there would be reinstatement, a handsome apology, promotion, a raise in pay. . . .

Smith returned to his surroundings. Folger Avenue presented a solid five-story front of ancient wooden houses, painted mud color. The ground levels housed saloons and eating-places in almost continuous succession; the few stores intervening were given to the sale of cheap clothing, second-hand goods, weapons, souvenirs of space, medicinal preparations and specifics against out-world ailments; in the upper stories were cheap hotels, warehouses, an occasional Class 12B brothel.

In spite of much that was squalid, Folger Avenue was rich with a certain swashbuckling charm, and equally rich with odor: the musty scent of the warehouses, stale spirits from the taverns, garbage in the gutter, perfume from an oil adulterator.

At last the wooden houses fell away, and Folger Avenue gave into the space-port, a great seared oval bordered by the Evan River. Three space ships occupied the far end of the field; on the lap-strake of the nearest Smith read the silver letters: *Messeraria*.

He trotted across the field, dodging crazy lenses of mottled green glass burnt into the soil by departing ships, mounted the ladder into the *Messeraria*.

A quartermaster on the gangway sat reading a paper: a gray-skinned little man no more than five feet tall, thin as a heron. He put down his paper. "Yes sir, what is it? If it's bills, you'll have to see either the captain or the supercargo, and neither one's aboard."

Smith nodded carelessly. "Where can I find the supercargo?"

"He's liable to be any place. Might try the Bobolink in Rafferty Alley, off Folger Avenue."

"I'll do that," said Smith. "Er—were you aboard last trip?"

The quartermaster squinted sharply. "What if I was?"

"Just curious," said Smith hastily. "I hear you made a pretty good trip."

"Fair. Chow was distasteful."

"May I ask, what planets did you close?

"Who wants to know?"

"Just curiosity."

"Take it some other place."

Smith descended the ladder, started back across the field. A voice halted him. The quartermaster was looking down from the port. "This curiosity—don't go taking it near Captain Plum. He's a big rough man. Like to be unhealthy. I'm telling you out of kindness."

II

SMITH returned to Folger Avenue to search for Rafferty Alley. Every twenty steps revealed another little side-street. After wandering a hundred yards Smith came to a standstill, looking around helplessly.

A fat man wearing a remarkable green- and white-striped garment stood by the wall, observing him with speculative interest. Smith approached, made a polite inquiry.

"Rafferty Alley?" said the fat man. "Directly behind you, young fellow."

Smith turned, noted the street marker, and, a hundred feet down the alley, a bird outlined in green fluorescent tubing. "That must be the Bobolink."

The fat man was inspecting him, Smith thought, with more than ordinary interest.

"New to these parts, young fellow?"

Smith cleared his throat. "Well, yes and no."

"Gotta be careful along in here. There's strange characters watching and waiting for patsies." He layed a soft hand on Smith's arm. "Come along, I'll take you down to the Bobolink, we'll have a drink, and maybe I can do you

a good turn."

It occurred to Smith that the fat man would provide him with protective coloration; he would be less conspicuous with someone known to the district. He nodded. "Very well. It's only fair to warn you, I'm not a drinking man."

"Well, well," said the fat man. "Fancy that! Say," he nudged Smith with his elbow, "ever think you'd like to make a trip? You look like you might be good at figures. And it just so happens I know of a vacancy that wants to be filled quiet-like without any red tape."

Smith reflected a moment. The idea had many ramifications. Life in space was by no means easy and he would have to forget the supercargo of the *Messeraria*. He thought of the far worlds, the strange sights to be seen, the naked beauty of the stars seen in their native element. "I'd have to know more about it," he said cautiously. "I've never given the idea serious thought."

The fat man nodded, and pushed open the door into the Bobolink. When Smith paused, adjusting his eyes to the dimness, the fat man took his elbow and conducted him to a table where three men were sitting.

The fat man addressed the central of the three figures, a giant of a man with a low forehead, a coarse overhanging shock of hair, a splayed nose with tufts of hair sprouting from the nostrils. These the man had freakishly waxed and shaped into tiny mustaches. There was also a peculiar rancid odor, which reminded Smith of the bear pen at the Haight Memorial Zoo.

"Captain, sir," said the fat man, bending over the table with doggish servility, "here's a young fellow says he can figure pretty well and maybe he'd like to make a trip."

The giant turned clever little eyes up and down Smith's crisp gabardines. "Well, well, a dude. You ever been to space before?"

"Well, no, but—"

"Don't make too much difference. I need a man that knows how to add, how to take orders, how to keep his mouth shut. This damn fool here can't do any of the three."

SMITH followed his glance to the man at the captain's left. He sat morosely, with his back half-turned to Smith: the supercargo who had staggered drunkenly after him into the Star Control office.

Smith turned back to the captain. "You must be Captain Plum."

"That's me. Meet Bones, my steward—" he pointed to the fat man—"Jack Fetch, the mate, and—" he jerked a thumb at the supercargo—"this is Bilge."

The supercargo straightened in his chair. "My name is Lowell."

"Harrup!" roared Plum. "If I say your name is Bilge, that's your name."

Smith conceived that a year with Captain Plum in the welded steel tube of a spaceship might be trying. He rapidly diagnosed megalomania in Plum, sadomasochism in the hatchet-faced Jack Fetch and a shifted valence in Bones, the steward; a set of ship's officers overrich and over-ripe even in the unreal atmosphere of Rafferty Alley. Captain Plum and his nose mustache. Bones and his green-and-white-striped suit. Bilge Lowell and his delusions of an intelligent race out in the far places. Did he recognize Smith as the clerk from Star Control? Smith felt the brush of the hot black eyes, saw Lowell's pale brow furrow in thought.

Smith turned uneasily to Plum. "What's your ship?"

"The *Messeraria*. My own property." Captain Plum looked him over coolly. "Know her?"

"Never heard of her."

"A good ship," said Plum. "Good quarters, good chow." He winked slyly; the great brush of his eyebrow made near-contact with his cheek. "Maybe a little extra money at the end of the trip, if things go right."

"It sounds very interesting," said Smith. "I'd have to think the proposi-

tion over." He looked toward Lowell. "Er—your present man is leaving you?"

"Yes," said Plum. "He's leaving us."

Lowell said in a hoarse voice, as if his throat were lined with bark, "I've just been thinking. I've just been making myself up a philosophy, and I've come to the conclusion that there's nothing in the world as good as a good drink. What do you say to that, Captain?"

"I say that you've been following that philosophy too close, and it's liable to stove you in before you're much older."

"Pah. Nothing's as good as a good drink, unless it's one of them pretty jewels you carry in that big pocket of yours."

The captain swung a burly arm and there was a sound: half slap, half thud. Blood dribbled down the supercargo's chin. He grinned a wide, toothless grin. "No more teeth, cap. You're a mighty rough man."

Smith asked ingenuously, "Just what jewels are these? I'm interested in off-world minerals."

Plum's eyes glowed. "First thing you learn on my ship, son, is to ask no questions. Jump to it when orders are given, and you're fine as wine."

"Speaking of wine," said Lowell, "I'm now going to mix us a drink such as you've never tasted in the history of the world. Just like our last trip, eh, Captain?" He ducked back before Plum could strike. "Now then, don't hit a sick man. Hey, Bosco!" He called to the bartender. "Come over here."

"You got legs."

Lowell staggered over to the bar, returned with a tray full of bottles and measuring glasses.

"Watch close," said Lowell. He looked deep into Smith's eyes. "Watch close. This is important."

Smith stirred uneasily, glancing at Captain Plum, who leaned back, watching Lowell's motions like a cat fascinated by a bit of twitching paper.

LOWELL picked up a bottle, waved it in the air. "Here's arrack, good white arrack. But it should be red arrack. Well, we'll pretend it's red arrack. The recipe calls for: Red Arrack—twenty-six and a half c.c. Very well. I put it aside. Next, the Dubonnet. I pour the bottle into the pitcher. Now I take away—take away, mind you—fourteen c.c. Seem strange to you?" He eyed Smith searchingly. "No? Good."

Captain Plum chuckled indulgently. "Bilge is cooking you up some of the Fountain of Youth."

"A jag of that slop and age means nothing," said Jack Fetch.

Lowell ignored them. "Now this stuff is Fleur de Lys Liqueur. Just Lys is good enough; I never was much at this European lingo." With a sudden clutch he tore the label in such a way that only the "Lys" remained.

Lowell was r a m b l i n g insanely, thought Smith; a wink from Captain Plum confirmed the diagnosis. If only Bannister were here now!

In his husky voice Lowell said, "This is important. I'm a sick man, not long for the world. It's as well that the knowledge survives me. So: Lys—ninety-four c.c." He heaved a great sigh; his shoulders slumped. "There, that's the body of it. Now the trimmings." He laid out an orange and a lemon, three black olives and a green one.

Bones the steward suddenly bent forward, whispered into Plum's heavy ear. Plum's eyebrows shot upward; he struck out, swept the tray, bottles, glasses to the floor. The crash and clatter of breaking glass brought conversation throughout the Bobolink to a dead halt.

Lowell sat back grinning wearily at Captain Plum. "Who's the crazy one now?" He coughed. Plum surged forward, raised his arm; in sudden pity Smith reached out, pushed him back into his seat. "For Heaven's sake, Captain, take it easy! The man's not well!"

Bosco the bartender had been sweeping up the broken glass. "Who's going to pay for the good liquor and glassware? Three bottles, arrack rum, wine and liqueur—that's twenty dollars—and

five for the glass."

"Take it out of Lowell," said Plum with a heavy-lidded stare. "He ordered the drinks."

Smith said sharply, "The arrack and the liqueur weren't broken; you picked them up and carried them off. And that glassware isn't worth a dollar. Here—two dollars for half a bottle of wine, a dollar for the glass." He shoved bills at the bartender. "That's all you'll collect here; if you want more—" He paused, feeling the baleful weight of Captain Plum's eyes on his skin.

Bosco said spitefully, "You're sure a smart snipe, ain't you?" He took the money and went muttering back to the bar.

Plum said, "Does seem like you're pretty big for your britches. Minute ago you pushed me; can't say as I like it." He came to his feet suddenly, as if snapped up on a spring. A hand slammed around, struck with a crushingly sick impact.

Smith tottered limply back, caught himself with his elbows over the bar. His eyes went dim, something strange clamped at his brain. Faintly he heard Jack Fetch say in a pleased breathless voice, "The young fool's gonna challenge you, Cap; the—young—fool . . ."

Smith whirled through nightmare, through a fury of thudding blows that seemed to diminish in intensity. From a great distance he heard sounds, but the impression most vivid was Captain Plum's great face, swollen and turgid, with the ridiculous nose-mustache, the eyes staring, wide open, the mouth working up and down as if he were chewing.

His own arms and feet were moving; he felt the jerk and strain; he felt the breath burn in his throat. His knuckles stung; he saw Captain Plum stumble awkwardly, trip on a chair, fall flailing to the floor. From his pocket rolled a green ball.

Smith stared stupidly down at Plum, who sat staring back, his eyebrows a bar across his face.

The green ball glittered, sparkled. On a sudden impulse Smith seized it, turned, ran out the Bobolink and pell-mell down Rafferty Alley. He turned into Folger Avenue, hearing the thud of steps behind him.

First came Jack Fetch, running like a weasel. Behind was Captain Plum, yelling hoarsely.

Smith turned the corner, stopped short.

Jack Fetch came swiftly around. Smith hit the saturnine gray face as hard as he could; Jack Fetch tottered blindly toward the gutter. Smith turned, ran up on Folger Avenue.

A taxi stanchion rose from the street; a cab was moored to the davits. Smith jumped on the lift; the chain moved, he slid up the tube. From the platform he glimpsed the hulk of Captain Plum striding like a mad colossus down Folger Avenue.

He jumped into the cab. "Star Control Field Office," he directed.

BANNISTER sat with the jewel between his fingers, fascinated by the delicate snowflake light-spangles forming, building, expanding, varying, dissolving, one after the other. "It's like nothing I've ever seen before. I'll have the mineralogist look at it. Or—" he hesitated, inspected the jewel more closely—"maybe it's a matter for the biology department."

Smith hitched himself forward in his chair. "Now what? Do you think we'd better send the patrol out for Captain Plum?"

Bannister flicked Smith's face with a cool glance. Right now he's probably in the patrol office, signing a complaint against you for stealing his jewel. I can't say that you've handled this very well." He turned back to the jewel. "I had already assigned two men to check up on Plum; now there's no telling what he'll do."

The visiphone buzzed; Bannister leaned forward, punched a button. "Yes?"

"Sergeant Burt here, sir. We've picked up Lowell, the supercargo, in Chenolm Way, off Folger Avenue. He's been aratinized. Face yellow, eyes and tongue hanging loose. We've sent him to the hospital, but I'm afraid there's nothing more to be done."

Bannister cursed softly. "Damned scoundrels. How about Plum?"

"He's dropped out of sight."

Bannister nodded grimly. "Keep looking for him." He snapped off the visiphone. For a moment he sat motionless, then sighed heavily. "Well, that's that. Lowell is done for. He'll never talk to anybody again. As good as dead."

"He was lucid enough in the Bobolink," said Smith doubtfully.

"That was an hour ago. He's been dosed with aratin since, and his brain is bubbling like a pot of hot mush." Bannister sat back, looking thoughtfully at Smith.

Smith moved uneasily in his chair.

Bannister said, "I have in mind a job I think you can do. If you carry it off, you'll get a promotion."

Smith frowned. "I'm not so sure that—"

"You're a good Star Control man?"

"I was, until I was fired this morning."

Bannister gestured impatiently. "That's all water under the bridge; you're hired again. You understand that this hint of contact with an intelligent race is unprecedented? How important it is that we either verify or disprove it?"

Smith nodded. "Certainly."

"A Star Control man is resourceful and daring—right?"

"Right."

Bannister pounded the table. "We can't let Plum antagonize this race, if it exists, or destroy it with Earth diseases. If it exists, we've got to find it. And you're the man to do it, Smith!"

Smith blinked.

"Here's how I see it," said Bannister. "If there's money to be made looting this planet, Plum will be out and away as soon as he organizes a trip. Once in space, under sky-drive, he's gone. We can't trace him. Unless of course we have a representative aboard. There's where you come in. He's practically hired you already. You return the jewel to him, tell him you're sorry you ran off with it, and that you want a chance to pick up a few yourself."

SMITH sat hunched in his chair. "You don't think he'll be angry with me?"

"You've brought his jewel back; why should he be?"

"He won't—" Smith paused, tried to gauge the temper of Plum's mind.

"Won't what?"

"Well," said Smith, "don't you think that if he got me out in space, aboard his ship, that he might take advantage of the situation to—well, beat me up?"

"I don't see why," argued Bannister.

"But I knocked him down in the Bobolink."

"He respects you for it."

"You don't think he might use that aratin stuff on me?"

"What good is a man dosed up with aratin? He needs you as a member of his crew."

Smith chewed his lips.

"I'll give you a packet of hyolone," said Bannister heartily. "Out in space, when you go into sky-drive, drop it into the thrust-box. The ship will leave a trickle of luminescence behind that we can follow at a safe distance."

Smith still seemed uncertain. Bannister eyed him under half-closed lids. Suddenly he turned to the visiphone. "Codge, get credentials ready for Sergeant Robert Smith—" He looked sidewise at Smith, calculated rapidly. There was nothing to lose. "Make it Lieutenant Robert Smith, of the Extraordinary Squad."

Smith sat back in his chair. Lieutenant Smith of the Extraordinary Squad! He rolled the words around his tongue. Bannister watched covertly a moment, then rose to his feet, motioned to Smith.

"Come along, Lieutenant. I'll drop

you off at the field."

They flew out across Lake Maud, circled Mount Davidson, dropped low across the Graymont district, and presently flew along the taxi lane only a few hundred feet above the mud-colored old buildings of Folger Avenue.

Below was the space-port. Polished black hulls lay quiet around the field like enormous dead beetles.

Smith pointed. "There's the *Messeraria*. Or rather—" he hesitated, frowned, searched the field. "It was about there, near that new glass blister."

"New glass blister, eh?" Bannister spoke in a strained voice. "Well, Lieutenant Smith—" he laid heavy stress on the title—"it appears the bird has flown the coop."

Smith drew a deep breath. "Perhaps it's all for the best. I never was completely comfortable with the plan. But there'll be other jobs."

III

RETURNING toward the Star Control Office, Smith pointed to a landing plat on a terrace above St. Andrews Place. "There's the Odd-Angle Club, that blue blazon with the green bars. I happen to be a member. Would you care to lunch with me, by way of celebration?"

Bannister gazed at him blankly. "Celebration? What for, in God's name?"

"My promotion."

"Oh," Bannister smiled grimly. "Your promotion, indeed."

He landed the boat and a moment later Desdunes, the maitre d'hotel, ushered them to a seat.

Smith signalled the bar-boy. "A drink before lunch, perhaps?"

Bannister grudgingly relaxed his aloofness. "A good idea."

"I'm not a drinking man myself," said Smith. "Alcohol corrodes the intellect. But naturally there's not an objection in the world to your enjoying yourself."

"Very decent of you," said Bannister dryly. He looked Smith up and down with dispassionate curiosity.

"What's the matter?" asked Smith uncomfortably.

"Nothing at all. I know a woman who can't stand the sight of feathers."

Smith was unable to trace the sequence of thought, and glancing sidelong at Bannister, seemed to notice a lack of warmth in his manner. Was it possible that Bannister considered him something less than a good fellow? Such a notion might militate against further advancement, no matter how efficient his work.

Smith said heartily, "Let me order you something a little different—a drink I imagine you've never tasted before."

Bannister made a wry face. "Camel milk, something of the sort? Thanks no, I'll stick to whisky."

"Just as you like," said Smith. "It was recommended rather highly by the *Messeraria* supercargo; he was so emphatic that I noted the recipe. Arrack—red arrack—dubonnet, a liqueur—"

"What's this?" demanded Bannister. "Lowell telling you how to mix drinks?"

Smith found a soiled bit of paper in his pocket. "Red arrack, twenty-six and a half c.c. Dubonnet—a half bottle less ten c.c. Fleur de Lys liqueur, ninety-four c.c. An orange, a lemon, four olives."

Bannister, sitting rigidly in his chair, asked, "Why haven't you mentioned this before?"

Smith made an indulgent gesture. "Just more of this alcoholic stuff."

Bannister asked in a steely voice, "Could it possibly be that he was attempting a secret communication?"

Smith considered, "I will say this much," he admitted uneasily. "Immediately afterward, Captain Plum became violent."

"Exactly what happened? Try to remember every detail."

Smith described the episode to the best of his recollection.

Bannister, frowning, scanned the formula. "Undoubtedly he recognized you

and was trying to tell you about this secret planet. The orange and the lemon seem to refer to a double star, the three black and the green olives tell us that the planet in question was fourth from the sun."

"And the numbers must be position coordinates for the double star."

Bannister nodded shortly. "So it would seem."

"Take the first figure along the x-axis," said Smith excitedly. "Twenty-six and a half light years toward Polaris. The second figure—now I see, it's negative. A negative ten light years along the equinoctial axis, or ten light years, roughly, toward Denebola. The third figure, along the solstitial axis—ninety-four light years toward Betelgeuse. Combine the three—" He scribbled on a bit of paper. "Square root of the squares of twenty-six and a half, ten and ninety-four. Somewhere near a hundred. The direction would be rougbly—" he paused, chewed his pencil—"probably in the direction of Procyon. That would be fairly close. A hundred light years in the direction of Procyon."

Bannister made an impatient motion. "Please let me think."

Smith sat back with injured dignity. Lunch was served; they ate almost in silence.

OVER his coffee Bannister leaned back witb a sigh. "Well, it may be a wild-goose chase. But I'm going to stick my neck out, requisition a cruiser."

"I suppose I'd better wind up my affairs," Smith said tentatively.

"No need at all," replied Bannister. "You'll be travelling no farther than the sub-basement storeroom."

"Mr. Bannister, I hardly think you're being reasonable."

"Reasonable or not," growled Bannister, "I can't risk another of your fiascos." He rose to his feet. "And now I'll have to be back to work. Thanks for the lunch."

Smith watched the broad back retreating, then ordered more coffee.

After a few minutes' thought he rose to bis feet, went to the visiphone, called Harry Codge at the Star Control Office.

"Harry," he said to the ruddy face, "have you made up those credentials for me yet?"

Codge nodded sourly. "You must be related to Bannister."

Smith ignored tbe implication. "Drop them into the tube, will you please? I'm at the Odd Angle Club, St. Andrews Place."

He took himself to the club office and a moment later a little cylinder thudded into the receptacle.

Smith pinned the badge inside his coat, tucked the plastic card into his wallet, ordered a cab and flew to the Bureau of Registry hard by the space-field.

He displayed his new credentials to the girl at the front desk. "Bring me the card on the SpS *Messeraria*."

"Yes sir." She went to a file, thumbed through once, twice. "That's strange."

"What's the trouble?"

"The card's not in place. Unless—" She crossed the room, flipped through a small stack of pink and blue cards. "Here it is. Change of ownership."

"Let's see the card," said Smith in high excitement.

He ran his eye down the form. "Built twenty years ago. First owners—Vacuum Transport. Sold to R. Plum and Chatnos Widna. New owner—Hermetic Line. Well, well."

"Anything wrong, Lieutenant? The Hermetic Line is very conservative—"

"No," said Smitb hastily. "Nothing at all."

He turned away engrossed in his thoughts. It would be a fine feather in his cap to drag the sullen but cowed giant before Bannister for questioning. And evidently be had not departed with the *Messeraria*.

Smith crossed the space-field, climbed the ramp into Folger Avenue.

There was Rafferty Alley, and there the Bobolink. It was unlikely, thought Smith, that Plum would still be in evi-

dence after the events of the morning; still it represented a starting place for an investigation.

He felt for his badge, strode down Rafferty Alley, entered the Bobolink.

There was confusion, which Smith later was never able to sort out into component events; it was as if everything occurred in a single timeless clot.

He remembered a scraping of chairs, voices, a bull-bellow, he saw Plum's great angry face, the lips drawn back over yellow horse-teeth; he felt a clutch at his knees, an eye-watering jar at the side of his head, a buffet in the pit of his stomach.

Reality floated upward, like a picture rising on a screen leaving black beneath. Light, motion, sound, color went completely out of his perception; there was nothing.

CAPTAIN PLUM'S face, large as a house, seemed to fill the sky. A black velvet beret hung rakishly past one ear; his nose-mustache was preened and twisted to a fare-thee-well. He was so close that Smith could see the small corrugations of his skin, the bristles, the ropy muscles of the cheek stubble on the massive rectangular chin.

The little eyes peered cunningly into Smith's face. "You alive, fellow? Yes? You're lucky. Now, what did you do with my little trinket?" He took Smith's chin between his thumb and forefinger. "Hey? Where's my little gem?"

Smith became aware of a curious lightness in his limbs. He focused his eyes on the background. Metal. Suddenly terrified, he sought to rise to his feet. A belt around his middle restrained him.

Captain Plum set heavy feet to the wall, pushed his bulk out at right angles, stood in apparent defiance to sanity.

"We're in space!" shouted Smith. "You've kidnaped me!"

Plum grinned enormously, like a bear. "Shanghaied, they used to call it. Young fellow, you don't know how lucky you are. I could have put you away simple as squeezing a bug, but I used my head. You're one of them Space Control hoopte-doos; still, I need a man to do my paper work, and you happened in at the right time. Just right. I kill me two birds at one lick. Three birds, as it may be." Plum ticked the points off his fingers. "I get me an honest worker. He better be honest. I get a Control snooper off my tail. And I get myself a bit of exercise sparring you now and again; rather handy you showed yourself."

"But," cried Smith, "you don't own a ship any more! You sold—"

"This ain't the old *Messerana*, young fellow." Plum showed the inside of his maroon maw in a soundless gust of laughter. "This here's the *Dog*, a little boat more suited to our good purposes. And now you've rested on your lowers long enough; it's go to work for you, earn your way."

"I didn't ask to be brought aboard," grumbled Smith.

Plum's mouth compressed; his hand caught Smith a buffet on the cheek. Smith felt his teeth creak; before him came a vision of Lowell's toothless mouth. He sat quietly, staring at Plum.

Plum grinned slowly. "Sure, I know what you're thinking, that you'll bide your time and come at me when I least expect it. Well, I say try ahead, try ahead. Better men than you have gone that path, and it keeps me lively. Now, young fellow, on your feet. And remember I'm a hard man to please; there can't be a red cent over or under on the books; it all must come out so."

Smith silently unfastened the belt at his waist. The cruiser that Bannister had ordered out, he thought, must surely run down Plum's ship. But if there were a battle, he might easily be lost with the ship. And in the meantime— A threatening move by Plum cut short his reflections. "Are you done dreaming?" growled the giant.

Smith tried to rise to his feet; instead set himself floundering awkwardly into the air.

Plum's guffaw stung him almost be-

yond endurance. He bit his lips, and steadying himself on a stanchion, turned to Plum. "What is it you want done?"

"Up forward, my lad, up in the chart room: that's your nook. First you'll sort out my old charts, arrange them in the projector. When I press for a sector, I want to get that sector and none somewhere fifty parsecs distant. Very important. That's fair warning. Up forward!"

SMITH pulled himself forward, aching in every joint. The *Dog,* he perceived, was a small advance ship, one of the exploration "terriers" built for maneuverability, landing ease and cheap maintenance, a type in vogue among the sun-duckers of outer space. But no matter how fast, how shifty, how desperately Plum drove his ship, once the cruiser thrust out a magnetic finger it would never win free. Smith shot a look through the forward port, seeking Procyon, past which the course must lead.

Nowhere in the field of his vision was there such a star. The sky appeared more like the region north of Scorpio—the constellation of Ophiuchus, in a direction exactly opposite to Procyon. He stared. There was some dreadful mistake. "Where are we headed for?"

"None of your damn business," snarled Plum. "Get forward into the chart room, and thank yourself I'm a merciful man."

Smith pushed himself into the chart room, numbly began to sort the star-charts. This was death, he thought, and he was in hell. Before his eyes was a black and gray panel, a bank of dials, a mesh, a row of switches. Smith focussed his attention. Radio! Long-distance radio—launching its meaningful radiation in a parallel-sided bar, to take it hot and sparkling across space.

How far had they come? Little more than a light-week or two; he could hear the whir of motors still building up acceleration.

He glanced out into the bridge; Captain Plum stood by the door bellowing back toward the engine room.

With trembling hands Smith twisted dials, aimed the antenna dead astern, flipped the switch. In a fever of impatience he waited for the circuits to warm into full power, meanwhile listening to Captain Plum's salty condemnations of the engine-room gang.

Once more he checked the direction of the beam. Dead astern, to hit Earth on the nose. He set the frequency to standard space-band. A hundred monitors were tuned to the frequency.

Now.

He spoke into the mesh. "SOS—Star Control attention. SOS. This is Lieutenant Robert Smith aboard Plum's ship the *Dog.* SOS. Attention, Bannister, Star Control Field Office Twelve. This is Lieutenant Smith. I have been kidnaped." The edge of his attention sensed that Plum's voice had quieted; he heard the rustle of heavy movement in the bridge. Desperately he bent to the mesh; he might not have another chance. Power on, direction right, frequency right. "SOS. This is Lieutenant Robert Smith, Star Control, kidnaped aboard Plum's ship, headed toward Rho Ophiuchus." He became aware of a great shadow in the doorway. "Kidnaped aboard Plum's ship, headed toward Rho Ophiuchus, Robert Smith speaking—" He could bear it no longer; he looked up. Plum stood watching him from the doorway.

"Ratting on me, hey?"

Smith said with feeble bravado, "I got the message through. You're washed up, Plum. If you're smart you'll put about."

"My, my, my," Plum jeered mincingly. "My and my Aunt Nellie. Go ahead, call again if you like."

With one eye on Plum and suddenly anxious, Smith leaned toward the mesh. "This is Lieutenant Robert Smith, aboard Captain Plum's ship, *Dog,* bound for Rho Ophiuchus—"

Plum moved carelessly forward. His hand struck Smith's face with a sound like beef liver dropping on a butcher's block.

Smith, crumpled in a corner, looked

up at Plum, standing in his favorite pose, legs spraddled wide, arms behind him.

"Damn addle-brained s n o o p e r," snarled Plum.

Smith said weakly, "It'll go just so much the worse for you when you're caught."

"Who's going to catch me? How am I going to be caught? Hey? Answer me that?" He prodded Smith with his toe.

Smith slowly drew himself to his feet. He said in a tired voice, "I sent the message three times. It's bound to be picked up."

Plum nodded. "You sent it out—dead astern. Sure the monitors will pick it up. At the speed we're leaving Earth, the frequency they get will be so they can count the cycles on their fingers. That radio isn't much good unless we're stopped."

Smith numbly considered the radio. The speed of the ship would make his message completely unintelligible.

"Now," said Plum harshly, "get back to your work. And if I catch you fooling with the equipment again, I'll treat you fairly rough."

IV

IT WAS as if the ship lay motionless, the center of all, and the galaxy flowed past in a clear dark syrup, the stars like phosphorescent motes in sea water—lost and lonesome sparks.

Two points were steady: a wan star astern and an orange-yellow glint ahead which gradually resolved into a doublet. So the days passed. Smith slunk about the ship as inconspicuously as possible, dreading the daily drubbing Captain Plum administered under the guise of calisthenics.

During the bouts both men wore magnetic slippers and twelve-ounce gloves, the exercise lasting until Captain Plum was winded or Smith too dazed to afford further entertainment.

As time went on, Smith became increasingly familiar with Plum's style of combat: a full-chested prancing forward, arms thrashing. Perforce Smith learned the elemental tricks of defense, but in a sense this proficiency defeated its own purpose. The more adroitly he fended off the punches, the more cleverly he rolled and ducked with the blows, so did Captain Plum's violence wax, and Smith saw clearly that the end would be at one of two extremes: either he would achieve an impregnable defense or else Captain Plum would kill him with a single terrible blow.

To avoid such an impasse, Smith tentatively went on the offensive, jabbing at Plum after his tremendous swings had thrown him off balance. The ruse was successful to such an extent that when Captain Plum found himself unable to land effective blows, with Smith darting in at will to pummel his nose and eyes, he insisted on the exercise at ever-longer intervals. At the same time his aversion to Smith reached the point of obsession.

The last few bouts were terrible episodes, in which Captain Plum, red-eyed and roaring, charged like a bull, lashing out in wide roundhouse sweeps, any one of which would have broken Smith's bones. Half-measures were worse than none, Smith now realized; he must either become a supine wad of flesh for Plum to pound at his pleasure, or he must hurt Plum badly enough to discourage him—again a dangerous undertaking.

The final bout lasted for half an hour. Both Smith and Plum reeked with blood and sweat. Plum's nostrils flared like a boar's, his great chin hung lax and limp. Smith, seizing an opportunity, struck as hard as he could, on a downward slant at the loose-hanging jaw. He felt a snap, a crush, and Plum staggered back clasping his face. Smith stood panting, half expecting Plum to go for his gun.

Plum rushed from the cargo hold, while Smith, full of foreboding, made his way to the cubby-hole which was his quarters.

CAPTAIN PLUM appeared at the mess table, his jaw taped, his lips suffused with violet. He brushed Smith with his eyes, nodded with grim menace.

Later, Smith was in the chart room, calculating full consumption against distance traveled. Plum lurched close up against him. Smith turned his head, looking close into the hairy face.

"You're a mean son of a gun, ain't you?" said Plum.

Smith saw that Plum was toying with an eight-inch blade. Smith said in a low voice, "Anybody's mean when he's driven to it."

"You talking about me, young fellow?"

"Take it any way you want."

"You're walking on thin ice."

Smith shrugged. "I don't see how I've anything to gain by being polite. I don't expect much out of this trip."

The speech seemed to appease Plum; he slowly put his knife up. "You asked for it when you started that schoolboy Star Control stuff."

"I don't see it that way. Somebody's got to be at the top. In this case it's Star Control. You'd be better off if you'd turn back and make an honest report on this planet, whatever it is."

"And lose all that money? What do I care for Star Control? What have they done for me?"

Smith leaned back against his workbench, with a curious sense of speaking in an incomprehensible language. "Don't you care for your fellow-men?"

Plum vented a gruff bark of a laugh. "Humanity never bust itself open working for me. And even supposing I did, what difference does it make what goes on out here eighty miles past nowhere? Just a bunch of fuzzy yellow things."

"Do you really want to know what difference it makes?"

"Go ahead, spill it."

Smith gathered his thoughts. "Well, in the first place, human knowledge is only a small fraction of what can be learned about the universe; we've concentrated on the subjects which fit our kind of minds. If we find another civilized race, we'd meet an entirely different complex of sciences."

Plum used a coarse expression. "We know too much as it is; if we knew any more we'd be clogging our drains. Anyhow, there's nothing out here on Rho that we don't know already."

"Maybe yes, maybe no. But if there's a civilized race, men with the proper knowledge ought to be the first to make contact."

"Then where'd my cut be? I've gone through lots to get where I am. I've taken it on and I've given it back, just to get a crack at a chance like this. Those jewels are novelties, worth plenty on Earth. I can get out to Rho, I can clip the fuzz-balls loose of the jewels, I can get back to Earth—and my fortune's made. If the scientists found Rho, they wouldn't tell me, would they? Why should I go spill my guts to them? You got things twisted all screw-wise, young fellow."

"If these things are intelligent, perhaps they're on their guard now. You'll find it dangerous taking any more of the jewels."

Captain Plum threw back his head, then winced at the wrench to his jaw. "Not a chance. We're as safe on Rho as we are in our own bunks. And why? It's easy. These fuzz-balls is blind, deaf and dumb. They walk around holding up jewels like they was offering 'em to us on velvet pillows. A clip of the knife, fuzz-ball flips over, the jewel comes rolling home. And that's the way it goes."

Leaving Smith chewing his lip nervously, Captain Plum slapped the chart table with the flat of his knife and turned away.

THE *Dog* coasted up at the big orange sun, with the small yellow sun hanging beyond, no more than a cusp visible. Nearby were the planets, yellow motes—one, two, three, four.

Through the port Smith watched the fourth planet, a world smaller than Earth, with an oily yellow atmosphere,

and which possessed an arid surface.

From the bridge came the voices of Plum and Jack Fetch, disputing where best to set the ship down. Fetch was inclined to caution. "Put yourself in their shoes, make as if it's Earth."

"Cripes, man, this ain't Earth. This is Rho Ophiuchus."

"Sure, but think of it like this: a few months ago there's an epidemic of heists; if they've got the brains of a turtle, they'll take precautions. Suppose we set down beside one of the big castles. Suppose they come along, discover the ship. Then the jig is up."

Plum spat disgustedly. "Hell, them fuzz-balls live in a dream world. They come along, feel the ship, they think it's a new kind of rock. They don't even know they've got a sun or that there's other stars; like that lightheaded supercargo says, they got a way of looking at things that's different from ours."

"That's right. And maybe they'll know we're back by some different kind of sense, and then there'll be hell to pay. Why take the risk? Set down out in that little desert; then we can work up to the castles in the boat."

"Too complicated," growled Plu "Ther men getting lost and i boat breaking down."

Compromise was reached: the ship would be landed in desolate country as near as possible to the castles, close enough to allow its use as a base of operations.

The greasy yellow atmosphere swirled up around the ship. Jack Fetch sat at the controls while Plum stood spraddle-legged at the telescopic viewer. "Slow," he called to Fetch. "We're getting low. Take her north a bit, I see a whole settlement of big castles. Now straight down; we'll land in that little arm of desert."

Smith, standing at the chart-room port, glimpsed a series of large yellow cubical structures. From a liquid gleam at their centers it seemed as if they might be tanks.

A low ridge cut off the view; the ship grounded. Almost immediately he heard the exit port jar open, and Captain Plum, in a heavy space-suit, crossed the foreground, walking out of his vision.

Knees shaking under unaccustomed gravity, Smith joined Fetch on the bridge. Fetch threw him a swift side-look, and turned away.

Smith asked, "What's Plum gone out for?"

"See how the land lies. If it's not safe we'll take off."

Smith peered up into the smoky yellow sky. "What's the atmosphere?"

"Hydrogen sulfide, sulfur dioxide, SO_3, oxygen, halogen acids, inert odds and ends."

"My word," murmured Smith. "Rather unpleasant stuff to breathe."

Jack Fetch nodded. "Last trip the atmosphere ate holes in our space-suits; that's why we left so soon. This time we've got specials."

"What were those square tanks?"

"The fuzz-balls live in them."

Plum's lumbering form came into view over the brow of the hill.

"Look," said Jack Fetch, "there's a fuzz-ball. Plum doesn't see him yet."

FOLLOWING Fetch's finger, Smith saw a mustard-colored creature on the hillside. It was four feet high, two feet thick—a hybrid of barrel cactus and sea urchin, with flexible feelers projecting from all sides, ceaselessly squirming, reaching, feeling. A glint of green came from the tip of its body.

"Blind, deaf, dumb." Fetch grinned like a fox. "And there goes Plum. Looks like he wants to start work at once. Never saw a man so keen after the loot."

Plum had paused in his stride; now he turned, moved cautiously toward the yellow-brown creature.

Smith leaned forward like a man at a drama. "Blind, deaf, dumb," he heard Fetch say again. Plum sprang forward, the blade of a knife flashed in the murky air. "Like taking candy from a baby." Plum held up the glint of green in a gesture of triumph, and the fuzz-ball

was a toppled mass of brittle matter.

"Murderous brute!" said Smith under his breath. He felt Fetch's sardonic scrutiny and froze into himself.

Plum stood in the locker. Smith heard the hiss of the rinses: first a sodium carbonate solution, then water. The inner door opened; Plum stamped up to the bridge.

"Couldn't be better," he announced, with vast gusto. "Six big castles over the hill. We'll clean up fast and get out."

Smith muttered under his breath; Plum turned, looked him over. Fetch said maliciously, "Smith isn't convinced we're doing the right thing."

"Eh?" Plum stared at Smith blankly. "More of your damn belly-aching?"

"Murder is murder," muttered Smith.

Plum scrutinized him with eyes like black beads. "I'm planning another this minute."

Smith raised his voice recklessly. "You'll have all of us killed."

Plum twitched, took a step forward. "You damn croaker—"

"Just a minute, Cap," said Jack Fetch. "Let's hear what he's talking about."

"Put yourself in the place of these creatures," said Smith rapidly. "They can't see or hear; they have no idea what's destroying them. Picture a similar situation on Earth—something invisible killing men and women." He paused, then asked vehemently, "Would we sit back and do nothing about it? Wouldn't we strain every ounce of brain-power toward destroying the murderers?"

Plum's face was wooden. He twirled his nose-mustache.

"You don't know the mental capacity of these creatures," Smith continued. "It might be high. Because you can kill them so easily means nothing. If an invisible monster dropped down on Earth, we'd be as helpless as these things here seem to be. But for just a short time. Then we'd start devising traps. And pretty soon we'd catch one or two of our visitors and deal pretty roughly with them."

Plum laughed rudely. "You've talked yourself into a job, young fellow. Get into a suit."

Smith stood stiffly. "What for?"

"Never mind what for!" Plum snatched a weapon from his belt. "Get into that suit, or you've had the last breath of your life!"

Smith went slowly to the locker.

Plum said, "Maybe you're right, maybe you're wrong. If you're wrong—well, we'll figure out something else to do with you. If you're right—then, by Heaven!" and he cackled a throaty laugh—"you'll be doing us a good turn."

"Oh," said Smith. "I'm to be the stalking horse."

"You're the decoy. You're the lad that moves in front."

Smith hesitated. Plum said dangerously, "Into the suit!"

Smith went to the locker and donned a space-suit. On sudden thought he felt at the belt where hung a holster for a gun. It was empty.

FETCH was slipping into his own suit, lithe as an eel. Bones the steward and the men from the engine room were likewise dressing themselves. The quartermaster took up his perch at the gangway.

Plum motioned. "Outside."

Smith went to the double chamber with Fetch. A moment later they stood on the surface of Rho—a brown-yellow hardpan, sprinkled here and there with bits of black gravel and little yellow chips, like cheese parings. Condensations in the atmosphere swirled like dust devils.

This was Smith's first contact with alien soil. For a moment he stood looking around the horizon; the strangeness of the world weighing upon him almost as a force. Yellow, yellow, yellow—all tones, from cream to oil-black. Right, left, up, down—no other color occurred in his range of vision except the varicolored space-suits.

Plum's voice rasped through the ear phones. "Up the hill—spread out. Every

one of the fuzz-balls you see, carve him. We can't have any spreading of the news."

Spreading the news? thought Smith. How could these creatures, blind and deaf as they were, communicate? Although it was inconceivable, this must be a civilization—no matter how crude—without communication. He twisted the dial of the space-suit radio. Silence up the band. Up—higher, higher, almost to the limit of the set's sensitivity. Then a harsh crackle, a sputtering of a million dots and dashes.

He listened an instant, turned the knob further. The sputtering fluctuated, then cut off abruptly. Smith twisted the dial back to Captain Plum and just in time.

"—Bones next, and where's that supercargo? Smith, you come along the outside right; if you want to wander off and lose yourself, that's your own damned lookout."

Smith thought dourly, it might be just as well; there was nothing in his future but the ultimate dose of aratin, or a bullet.

The line of men moved forward, up the slope. Smith looked tentatively back toward the ship. If it were deserted, if he could get inside, lock the port, he would have Plum at his mercy. But the outer door was clamped, and through the hull's-eye he caught the white flash of the quartermaster's face.

Smith sighed and trudged up the slope. He heard Plum's harsh cry of satisfaction. "Two, by God—two at once. Keep your eyes open, men. The sooner we make up a cargo and get off, the better."

Smith twisted the dial up to the band he had discovered. Clicking sounded loud and sharp, so loud that he came to a surprised halt.

He now stood among a tumble of sharp brown boulders a hundred feet from Bones and slightly to the rear; it was unlikely, he thought, that any of the others were watching him. He scanned the ground in his immediate vicinity. There was nothing. He climbed the slope; the noise grew louder. He veered left toward Bones. The noise lessened. He turned off to the right.

Behind a jagged black and yellow pinnacle he found the fuzz-ball—an aimless thing, groping a slow way up the hillside. In the very apex of its torso the green jewel winked and blinked like an electronic eye.

Smith bent close, fascinated. He noted that as the spangle of light formed in the green jewel, so did the radio sputter and sound. Each spangle was different from the one previous; Smith suspected that if the radio wave-pattern were made visible on an oscilloscope, there would be concordance with the pattern of the spangle.

THE FUZZ-BALL seemed harmless enough; Smith decided to experiment. With his transceiver tuned to the fuzz-ball's frequency, he clicked his tongue into the microphone. "Ch'k, ch'k, ch'k."

The fuzz-ball made a series of odd sidewise jerks and came to a halt, as if puzzled. The feelers waved querulously. Smith said, "Take it easy, fellow." The fuzz-ball teetered dangerously to the side; the feelers performed a disorganized throbbing. From the speaker came an angry clicking. The fuzz-ball stood stockstill. Smith watched in amazement.

He said again, "Take it easy, fellow."

The fuzz-ball behaved exactly as before, tottering awkwardly to the side. Smith watched narrowly. The feelers seemingly had clenched in the precise pattern as before.

Once more he said, "Take it easy, fellow," in identical tones.

Once more the fuzz-ball re-acted, in identical fashion.

Smith counted. "One, two, three, four, five."

The fuzz-ball twisted to the left, writhed certain of its feelers.

Smith counted again. "One, two, three, four, five."

The fuzz-ball twisted to the left, writhed the same feelers in the same way.

"This is odd," muttered Smith to himself. "The thing seems geared to radio stimuli, as if—"

He stared at the ground. A heavy black shadow showed, motionless.

He whirled. Silhouetted on the yellow sky was Captain Plum.

Plum's face was set in pale rage. He was speaking. Smith hurriedly turned the dial back to intercommunication.

"—lucky I came over to look. You was talking to the thing, you was ratting on us. Well, it's the last time." His hand went to his belt, came up clamped around his gun.

Smith feverishly dodged behind the black and yellow pinnacle. A bolt left a flickering, smoky trail in the atmosphere.

No use playing peek-a-boo, thought Smith desperately. He was a goner anyway. He clambered up the pinnacle in a frenzy, over a bit of a saddle, looked down at the back of Captain Plum's neck, advancing around the rock.

Bones' voice rang in his ear. "Lookout, Cap'n; he's over your head."

Plum looked up. Smith jumped into his face.

Plum stumbled, sprawled. Smith fell staggering to the ground, jerked himself to his feet. Plum was hauling himself erect. Smith ground his foot on Plum's wrist. The fingers opened, the gun lay loose. Smith grabbed. In his ear sounded voices, anxious questions. "You okay, Cap?"

Smith aimed the gun at Plum. Plum dodged and fell. Smith caught movement from the corner of his eye—Jack Fetch. Rapidly he backed into the clutter of rock. Captain Plum lay quiet. Jack Fetch showed himself cautiously. Smith raised his arm. Fetch saw the motion, and as Smith pulled the trigger he fell to the ground. The nose of the gun sputtered, melted to a blob of metal. The crystal had broken when Plum fell.

Fetch came crouching, sidling forward, and Smith retreated behind the rocks.

Plum roared, "Don't shoot him; let him be. Shooting's too fast for the skunk. He likes the place so much, he can make his home here, for a few hours anyway." Irrationally he raised his voice. "Smith, you hear me?"

"Yes, I hear you."

"You show your face, we'll shoot it off; we'll be watching for you. You're on your own now, snooper. You take it from here."

V

FROM a crevice between crags of black sulfur, Smith watched the men march up the hill. He glanced at the oxygen indicator. Six hours.

Cautiously he rose to his feet, looked back toward the *Dog*. The port was still locked and impregnable.

He watched the crew march up over the rise, looming on the sky. He had one chance; ambush one of them, get his gun, kill the others. One chance—dangerous, desperate, bloody.

He scrambled swiftly up the slope and peered over the ridge. There were no men in his immediate range of vision. But there were the castles—six great blocks sixty feet high, built of a dull tufa-like substance.

Smith circled to the right, around the ridge. He climbed a mound of granular stuff, like lemon-yellow sugar, and slid down the other side.

He caught a glimpse of Bones a quarter of a mile distant. No good—Bones was out in the open, and in any event Bones carried no gun. It had to be Plum, Jack Fetch, or one of the engineroom gang.

He dialed his radio up the band. A loud crackling told him he was near a fuzz-ball. There it was, a hundred feet distant. Smith watched it, fascinated. If it responded to the random noise he made, was he to assume that it had no mind of its own? If so, who or what guided it? What was its purpose?

Smith cautiously approached the creature. It moved over the ground, and now Smith saw that from its underside hung a tube which swept over the ground. When it passed over one of the yellow flakes that sprinkled the ground, it jerked, and the flake was gone.

Smith reached for one of the flakes. It came free of the ground with a trace of resistance; Smith saw a trailing mesh of dependent fibrils—a small sulfurous plant. The fuzz-balls walked abroad, gathering little bits of Rho Ophiuchus vegetables. For their own consumption?

Smith surveyed the valley. From where he stood, an easy way led down the hill, across a saddle, up a kind of rough ramp to the lip of the nearest castle, which was perhaps two hundred yards distant. Smith descended slowly into the saddle; and here the crew of the *Dog* came into view.

Down the valley they strode, along a rude road. They were busy. From time to time Smith saw the glitter of knife, the quick flash of green, the suddenly brittle mass toppling to the side.

Smith ran up the ramp to the top of the castle, watching the five men over his shoulder. His hand strayed toward the radio dial. Why not apologize to Captain Plum, ask to be given back his life? Surely something so precious was worth the humiliation. Smith shuddered. In his mind he saw Plum's gloating, blood-charged face, saw the lips twisting in a grin. There would be no mercy from Plum. Better a desperate ambush, or perhaps a boulder of glassy brown sulfur rolled down one of the slopes.

The castle beside him was full of turgid brown liquid. Water? Acid? It was more than ever like a tank from his present vantage point. The liquid boiled and swirled as he looked.

Down in the flat, Plum, Bones, Jack Fetch and the two engineers were proceeding along the crude road, overtaking and killing fuzz-balls which were strung out along the road about a hundred feet apart.

Something brushed Smith's legs; he started, swung around. A fuzz-ball wandered past him, lax as a somnabulist, and stopped beside the liquid. The surface boiled; a great arm rose up, wound around the fuzz-ball, lifted it, and dragged it under the surface. Smith stood transfixed, too startled to move. He backed slowly to the ramp.

On another ramp across the hollow suddenly appeared black forms: Jack Fetch, Bones, the two engineers. Where was Captain Plum?

SMITH saw him by the foot of the castle, looking up. Tuning into the communication band, he heard Fetch's voice. "Nothing up here, Cap—just dirty water. Some kind of cistern or blow-hole."

Plum roared back, "Don't you see no fuzzies? That's where they seem to live; there ought to be a whole swarm of them inside. Come on back down; let's split one of these castles open, see what's—"

A huge pale shape rose in the tank, four arms wrapped around the four men. Frantically, unbelievingly, they fought; Smith saw their desperate shapes black on the yellow sky. They tottered; the arms jerked them into the liquid. For a second or two the communication channel rang with their agony.

Then came Plum's bellow. "What's going on, what's—" his voice died suddenly, and a black silence followed.

Smith stumbled blindly down the ramp, away from the tank. These were terrible things, a terrible world. He paused, peering around the crumbling tufa. His sight misted and blurred through the sulfurous atmosphere; it was as if he were trying to peer into a dream. He saw Plum, standing silent, as if thinking.

Smith looked at his oxygen gauge. At normal respiration, he had four hours of life. He valved it as low as possible, tried to breathe shallowly, moved with the utmost efficiency.

Suddenly he knew how to deal with Captain Plum.

Plum turned, searched the landscape. Smith saw that he carried only a knife.

Smith slowly descended the slope, making no attempt to avoid discovery. Plum turned his head sharply and hefted his knife. Smith said mildly, "Do you think the knife will help you, Plum?" He picked up a cubical chunk of pyrite, heavy, compact, and continued slowly down the slope. It occurred to him that he was breathing hard; he saw that Plum was panting. He forced himself to breathe shallowly, to control his slightest unnecessary movement.

Plum said in a guttural voice, "Keep away from me, if you value your health."

"Plum," said Smith, "you're on your last lap, whether you know it or not."

"Says you."

Smith spoke in a half-whisper, with power turned high on his transmitter. Spend the power, save the oxygen. Keep Plum talking, the longer the better. "I was green when you dragged me aboard your ship. I'm not green now."

Plum cursed him in a thick voice. Excellent, thought Smith; anger increased the rate of his respiration. "I've seen gorillas as fat as you are," said Smith, "but none so ugly."

Plum's face burnt brick-color; he took a step toward Smith. Smith flung the pyrite; it struck Plum's head-dome, jarring him. Plum said, "I'm going to cut you open, Smith."

"Lumbering ape," said Smith. "You'll have to catch me first."

Plum lurched forward, and Smith retreated uphill. Plum weighed two hundred sixty pounds, Smith weighed one-seventy. Plum carried another twenty pounds slung over his back—knapsack and jewels.

Smith, keeping a few feet ahead of Plum, evading Plum's sudden dashes forward by virtue of his agility, led Plum ever away from the *Dog*.

Plum—stopped short. "You think you're going to get me up on top of that rim," he panted. "Think again, Smith. I don't know what happened up there, but I'm not gonna let it stop me."

"I saw what happened. I saw the whole thing. It worked out just as I told you it would."

"Don't try to play me for a sucker, Smith."

"You've *been* played for a sucker, Plum, but not by me. By whatever it is that lives inside the tanks."

Plum laughed jeeringly, slapped his knapsack. "I've got about thirty of those jewels right here. If that's what you call being played for a sucker—"

"Those aren't jewels. They're beautiful little radio receivers—better than anything we have on Earth. That's what I meant when I told you that there were things for us to learn here."

Plum's eyes narrowed. "How do you figure that?"

"If I'm right," said Smith, "the fuzzballs that you've been chasing up and down the planets aren't essentially living creatures." Plum was craftily edging forward, his knife concealed behind him. Let him come. Let him make a rush. "They act more like machines—half-living robots, if you want to use the word, designed to gather food for the tank builders."

PLUM, taken momentarily aback, blinked. "That's silly. Machinery don't look like that. Them things is alive."

Smith laughed. "Plum, you're not only unpleasant; you're stupid."

"Yeah?" said Plum softly, creeping a step closer.

"All you know is what you've seen on Earth—metal, glass, and wire. There's no metal here, just sulfur. They use sulfur in ways we've never conceived—something else Earth scientists would like to know. Sulfur, oxygen, hydrogen, traces of this and that. They make their machines differently than we make ours, perhaps breed them out of their own bodies. So if it's any pleasure to you, you're not a murderer—you're a saboteur. You've been wrecking machines and stealing the spark plugs

You've been a damned nuisance, and the people here set a trap for you. Got four out of five. Good hunting, I should—" Plum lunged forward. Instead of dodging, Smith charged forward and hit Plum with his body crouched.

Off balance, Plum clutched at him; they went down together. Plum brought his knife into play, trying to pierce the tough fabric of the space-suit. Smith ignored him, groped for Plum's oxygen hose. He caught it, yanked it loose.

Oxygen spewed out at a tremendous pressure, flapping the hose wildly. Plum cried out crazily, dropped the knife, caught the hose, kinked it, fitted it back over the nipple. Smith picked up the knife, threw it far out into the boulders.

Plum was coughing; some of the atmosphere had been carried into his head-dome.

Smith stood back, grinning. "Plum, you're as good as dead. I've got you where I want you."

Plum looked up, his eyes watering. "How do you figure, you got me? All I have to do is go back to the ship, take off, leave you waving good-by with your handkerchief."

"How much oxygen you got left?"

"I got plenty. Two hours."

"I've got four hours." Smith let the idea sink in for a moment, then said softly, "I'm not going to let you go back to the ship. Three hours from now I'm going back—by myself."

Plum stared at him, then snorted in vast contempt. "How you gonna stop me?"

"We might do a little fighting. Don't forget, you've taught me a lot this trip."

"You think you can hold me off for two hours?"

"I know damned well I can."

"Good enough. Go ahead, try it." Plum backed warily down the slope. Smith came after him and stepped in close. Plum beat his fist on Smith's head-dome, then brought up his knee, as Smith had expected. Smith grabbed the knee, jerked; Plum staggered, fell heavily on his face. Smith snatched at the oxygen tube. Oxygen thrashed out, flailing the tube back and forth. Feverishly Plum fitted it back in place, sat looking up at Smith with a strange, pale expression.

Carefully he rose to his feet. "You keep away from me, young fellow. Next time I get you, I'll bust your neck."

Smith laughed. "How much oxygen do you have left, Plum?"

Plum glanced quickly, made no answer.

"You're lucky if there's an hour's worth. It's half an hour to the ship. Still think you can make it? All I need to do is grab that tube just once more."

Plum said hoarsely, "Okay Smith, you win. You got me licked; I'm man enough to admit it. We'll forget the bad blood, we'll go back and there'll be no more talk of anyone being left here."

Smith shook his head. "I wouldn't trust you if you were Moses on a raft. That's something else you taught me, Plum. In a way, I'm sorry. I don't want to be responsible for anybody's death, not even yours. But once aboard that ship, with you and Owen against me, two to one, how long would I last? Not very long."

"You got me wrong, Smith."

"No, Plum. One of us is going to stay here. You."

Plum rushed him. Smith backed easily out of reach, leading Plum away from the ship. Plum pounded on, arms outstretched grotesquely, and Smith trotted ahead just out of reach.

Plum halted, red-eyed, then turned and ran in the other direction, toward the ship.

Smith brought him down with a tackle, and his hand found the oxygen tube. He hesitated. He could not pull it loose. It was too cold, too calculating, this slow stealing of a man's breath.

Only a moment. Revulsion or not, it was Plum's life or his. He jerked. Plum thrashed wildly to his feet, fitted the hose back in place. His fingers were trembling. The hose had not flailed so hard.

Motion entered Smith's field of vision —something black and big. Unbelievingly, he stared. Plum rose to his feet, stared likewise; together they watched the Star Control cruiser settle behind the hills, beside the *Dog*.

"Well, Plum," said Smith. "It looks like maybe you'll live after all. Spend quite some time in deabberation camp, of course How much oxygen you got left?"

"Half an hour," said Plum dully.

"Better get going. . . . I don't want to have to carry you in. . . ."

Noland Bannister nodded to Smith as if he had never been away. The Star Control office looked cool and dim and somewhat smaller than Smith had remembered it.

"Well, Smith, I see we brought you back alive." Bannister leaned back in his chair, stretching luxuriantly.

Smith said coolly, "I'd have made it back by myself."

Bannister's eyebrows rose. "Sure of that?"

Smith looked Bannister over carefully. He saw an efficient, hard-working man who resented office work, who unconsciously visited his irritation upon his subordinates. He saw a man no bigger, no brainier, no more resourceful than himself.

"Not that I wasn't glad to see the cruiser," he said. "It relieved me of the decidedly unpleasant job of killing Plum."

Bannister's eyebrows rose still higher.

"What I want to know," said Smith, "is how the cruiser trailed us out. Surely the coordinates Lowell gave me were wrong?"

Bannister shook his head. "The coordinates were correct. You merely applied them in the wrong system. You said, "Lowell gives us figures; they must refer to navigational data—X-Y-Z coordinates.' If you had considered a little more deliberately, you would have seen that the figures applied not to the rectangular system, but to astronomical, or polar coordinates." He blew smoke briskly into the air " 'Red Arrack' obviously meant 'Right Ascension.' 'Dubonnet' meant 'Declination.' 'Lys' meant 'Light-years.' The figures hit Rho Ophiuchus right on the nose: a fine double star. We didn't waste much time." He leaned back in his chair.

Smith flushed. "I made a mistake. Very well. I won't make it again."

"That's what I like to hear," said Bannister approvingly.

"What about that rating? Do I still have it?"

Bannister contemplated him. "You feel you've learned something about Star Control work this last trip?"

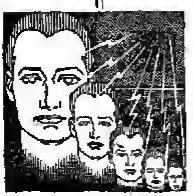
"I've learned all Captain Plum could teach me."

Bannister nodded. "Very well, lieutenant. Take a week off to rest up, then I'll find another assignment for you."

Smith nodded. "Thanks." He reached in his pocket, laid a glittering green sphere in front of Bannister. "Here's a souvenir for you."

"Ah," said Bannister, "another of the jewels."

"No," said Smith. "Just a good receiving set."



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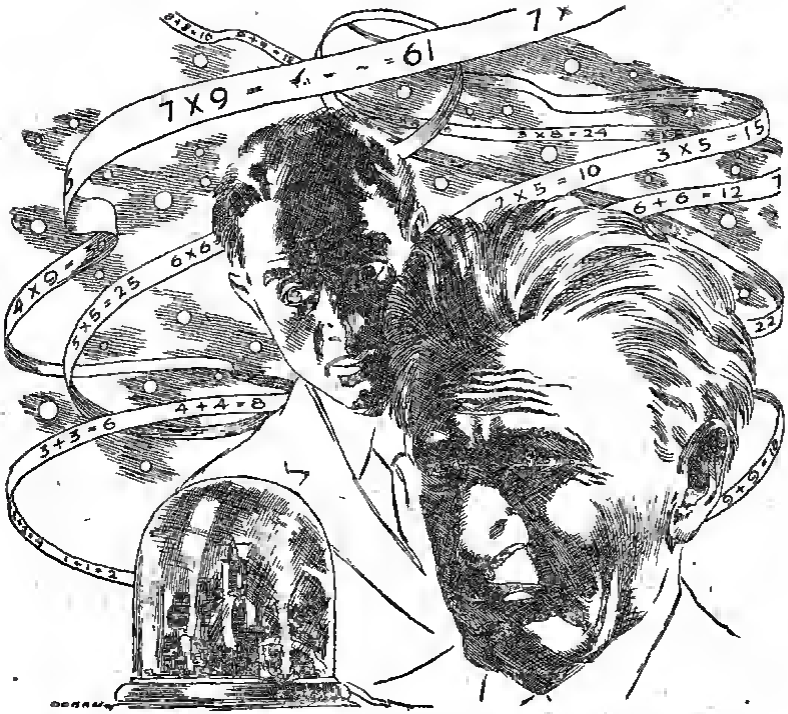

Problem for Emmy

By ROBERT SHERMAN TOWNES

EMMY LIVED — we all used that word—in a great room that had once been the University's ROTC armory. The walls had been painted pale grey and a few partitions and glass cubicles had been set up, but the shape and vasty reach of the old armory remained unchanged. Emmy almost filled the width of one end, standing a good fifteen feet high and coming out into the Room over twenty feet to where the heavy carpeting began. To the casual eye Emmy was no more than several huge grey-enamelled steel boxes

She stood in the Room . . . so much more than we, and so much less

with panels of tiny lights, a few switches, one large red light. It would have been difficult to explain to an outsider, when Emmy was silent, the reverent hush of the white-clad servants who attended her day and night.

Emmy had a much longer name—the Manndenker-Goldemacher Electronic Calculator Implemented Model M-VII—but those who worked for her and for whom she worked had shortened all that to just Emmy. Not alone from a need for brevity, but also because of the strong sense of personality which pervaded the immediate area of the great mechanism. Most of us who worked in the Room fell into the way of thinking of Emmy as a person; a clever, reasonable, amiable person. We talked to her, patted her approvingly after a particularly intricate problem was solved through her miles of wire and thousands of tubes. We even kept our voices muted in her softly-whurring presence.

THE head of the University's Department of Cybernetics (the new science that had sprung up in the forties to build and rule such machines) was a thick-set, heavy-maned Research Fellow, Dr. Adam Golemacher. On the foundation begun by his predecessor, Manndenker, he had erected a structure of ever-widening improvements, until Emmy was acknowledged to be the top electronic calculator of the country. The star, as it were. The awe which I, Dichter, his assistant, so often felt before Emmy never rose in Dr. G. To him she was a massive equation of comprehended elements; one million, two hundred and fifty thousand pieces of inert matter assembled under his direction, activated by the city power supply to turn over certain mathematical functions too length for human time limits. This and no more. Dr. G. knew Emmy far too well to be familiar with her.

But I had had no part in Emmy's creation. When I joined the staff in the Room, the machine was a performing entity. A complete, handsome thing, trim and tidy for all its size in the sleek steel housing. The walls nearby were muted with smartly dotted soundproofing that made a fine setting for Emmy. I liked this ship-shape cleanly place. The salary was not high, but Adam Golemacher was one of those men who educate with their mere presences. It was said everywhere that mattered that he knew more of this intricate and exquisite science than any man alive; and I had good reason to believe it.

IN HIS absurdly-tiny office, bare as a monk's cell but for the big photograph of Einstein on one sterile wall, Dr. Golemacher passed with final judgement on the problems to be presented for Emmy's study. Many industrial and scientific organizations submitted requests for help. Dr. G, his big dry hands roving like chunky lions through the thick jungle of his grey hair, would riffle through these tenders, tossing most of them aside—onto the floor, that is—with some sort of contemptuous remark such as, "Piffle-paffle, a cretin child could work this out with blocks in an hour." Then the rejected problems were sent back with stiff printed notes, for all the world like editors' rejection slips.

Now and then, the old man's startlingly young black eyes would crackle at some one of the problems. Threading through its preliminaries, he would catch the spoor of some elusive question that was basically exciting. Then, he would usually go on far past the desired matter. Since the client paid a flat fee of five-hundred dollars an hour for Emmy's services and seemed never disposed (through mystified humility. I always assumed) to argue the hills, Dr. G. charged the extra up to their contribution to science. Thus many a plastics manufacturer or bridge-builder stored up, unbeknownst to himself, extra

pearls in heaven.

When a problem was finally elect, it was sent to the mathematicians—perhaps better, The Mathematicians. In keeping with the temple-like hush of the Room and our acolytish attendance on Emmy, there was something hieratic about these twelve men. They sat in two rows of six white desks, with small adding machines and oceans of paper before them, bent over, muttering to themselves, dressed in white (no-

slowly becoming less and less difficult, more—vestigial. The Mathematicians knew this, of course, and one could often see, in a hard look or a wry word, their feral hatred of the great machine that was devouring the days of their lives in order to make their lives useless.

Dr. Golemacher did not encourage any of these humanizations of the machine. He regarded them as an insult to his reason—and to his handiwork.

Thinking Machines

LONG before the publication of *Cybernetics* and *Giant Brains*, long before the first electronic calculator existed even on paper, the thinking machine was a favorite theme in science fiction. There have been robots indistinguishable from human beings; glittering metal monstrosities as big as worlds . . . robots who have saved the Earth; who have destroyed it . . . robots whose circuits have sizzled with blood-lust; who have laughed and played, and once or twice even fallen in love with the gal.

In this welter of far-futurity, of oftimes melodrama and plot-device, the simple and affecting story of Emmy may seem a little closer to home.

Well, perhaps it is.

—The Editor

one seemed to know quite why we did all wear white) like the priests of a new logarithmic cult. Each of these men had a home life of his own, parents, place and past, individual dreams and lusts. But in the sweeping reaches of the Room (they sat at the far end from Emmy), drenched in the sunlight from the great windows, they were as alike as gears. And gears they were that set in motion the infinitely faster thought trains of Emmy.

It was their function to translate problems into language Emmy could grasp. The calculator, like all others, used binary rather than decimal numbers. The Mathematicians arranged the data in the form of marks on a tape that fed into the machine. This was the longest part of the operation of any problem. With the consant tinkering improvements of Dr. Golemacher, it was

Such personification savored to him of the sensational Sunday press. He was firmly convinced that all reporters were liars and narcotics. None of the bright-eyed young physics majors sent us by the feature editors ever got past me.

We kept a full staff of some score men who did nothing but clean and repair the machine. In their white coveralls from ankle to throat, they looked like a lot of swearing bunnies. And there was a lot of swearing to be done over Emmy, muted though it was. The myriad parts needed constant vigilance, and even with that breakdowns occurred at bad moments. There were even breakdowns that could not be explained; nothing would prove mechanically or electrically wrong, yet the soft clickings and the twinkling lights would offer patterns that were erratic, meaningless and untrue. The men would say that

it was just one of the old girl's bad days. Dr. Golemacher would roar, "One side, fumblers-bumblers!" and bare his arms and look furiously for a tangible trouble spot. But in the end, only a rest of a day or two would restore the machine to perfect working order.

THERE was one April morning, all silvery and aglow from a fine rain, when Emmy seemed to be looking and behaving especially well. I started up the switches that would bring the power into the cells. The black-coated cylinders that were her memory (for this one problem's course) hummed, the great encyclopedia of permanent memory on plastic slips stood at the ready, the whole end of the big Room throbbed eagerly. I fed in slowly the data on an especially complex problem of a midwestern plane maker. Emmy was being asked to consider several sets of conditions, weigh them and select the best; i.e., the cheapest and most efficient. The answer would eventually be typed out by Emmy's typewriter in her special blue ink. Later, rendered down into practical factors, it would be presented as a package from the oracle to the plane manufacturer—who would be awed.

But on that morning I could not, I believe, be awed; there was too much April. Perched on my high white stool, I fed the problem's many factors into Emmy's colossal scheme of connections—so like my own ten billion God-given neurons. Within the humming machine electronic "synapses," knowable and unmysterious, digested reams of figures in a fraction of a second. These were summed and integrated, cancelled and compared in the flick of an eyelid. On the panel the rows and rows of tiny red and white lights made a visible pattern of the mathematics, like Bach played on an enormous switchboard.

Outside the great windows, the campus was burgeoning. A calfish undergraduate was mawking over a full-bosomed coed; April was in the set of her body, her movements and sure acceptance of his bumbling tribute. The trees showed tiny green flames along the black boughs. It was no day to spend with a machine. In spite of Dr. Golemacher's strict rule about unnecessary noise in the Room, I hummed softly to myself—a bit of old nursery tune. (I am not well up on the jolly popular things one hears around). Suddenly, the error bell rang out sharply. The big red light flashed on and off hectically. *Error. Error.* I was taken completely off guard. There had seemed to be no flaw in the problem data as I handed it on to Emmy. Yet the harsh bell was announcing some serious mistake which the machine could not absorb.

I moved quickly to shut off the power. With my hand on the switch for the first section, I happened to glance at the twinkling panel. For a moment I did not quite grasp what I saw. Even when I did, reason and training fought against it for me. My hand on the switch was cold and sweating. There could be no mistaking it; the machine was not at work on the problem at all. Most of the rows of tiny lights were wholly dark. The remaining few were pulsing off and on in a definite rhythm. The rhythm of the little tune I had been humming: "London Bridge Is Falling Down."

While I stared foolishly at the lights, one of The Mathematicians, believed to be a young female, approached, instantly caught the melody in the winking lights and looked at me severely.

"Very droll. But what will Dr. G. say?" Then with a wee spark of feminine curiosity, "However do you do it?"

"*I'm* not doing it. *It's* doing it", I almost wailed.

She was not a frail woman. She gasped, stiffened in her starchy smock and marched off for Dr. Golemacher. I turned to Emmy. Before I quite knew what I was saying I muttered, "Now,

see what you've got us into," and fetched her case a swift kick. It hurt my ankle. The lights at once snapped off. When Dr. G. arrived there was no trace of the irrelevance. He did not bother to be incredulous. Me, he might have suspected ("You do not channel your imagination, Dichter; you waste it in fuzzy dreaming"); but he knew his Mathematicians. He came up at once with an explanation.

"You admit you were humming, Dichter. [I got the Prussian drillmaster frown here] Well, then, the machine picked up sympathetic vibrations, etc., etc." And that was that. It was a normal April morning again. The plane problem could get along, as it did, without any further hitch.

PROBLEMS came in steadily, always more difficult. Dr. G, roughly jolly, reveled in them as they got tougher. Under his wizard attentions, Emmy's "implementation" came ever nearer human ability. Cells sensitive to color, light and heat, voices, music and the invisible world of waves that permeate the universe were added and integrated to the thousands of miles of wire and tons of steel and glass. Dr. Golemacher even kept an eye on work in the brain-wave fields so that one day this area of energy might be explored for Emmy. She stood in the Room, growing up all the time. She had no self, no sentience, but we who moved about went like people seen in dreams or scenic wallpapers. We were hushed, minute, secret. The cleaners were over-careful with their cloths and applied cleaning pastes like beauticians. The repairmen used their tools with the respectful nicety of surgeons.

When Emmy got the job from the telescope at Palomar, we were besieged by the press. Dr. Golemacher shut himself away; I had to go through the endlessly amusing play on *Doctor Dichter* which had plagued me since I took my first degree. Newsmen, like scientists, have a somewhat elementary sense of humor. But Emmy was news. Taking the scraps of material grouped together at the observatory, Emmy mulled them over, then reached a finger into far space and unerringly pointed out the hulk of a dead star stumbling blindly among the burning suns. Once or twice, Emmy broke down completely as she tried to pry along the alleys of space and find out just where we were in the shifting cosmos. Then Dr. G would nurse and tease the great mechanism, "prescribe" rest and bully all at once. And back to the job she always went, running fingers along the edge of the fourth dimension itself.

But always we had to frame the question in detail. She could only give an answer or not give an answer. All her tubes could not match the billions of neurons, the zipping synapses of the human brain. She was so much more that we, and so much less.

Autumn came to the campus as burning woodsmoke and those young people who always seem to turn up every year. To Emmy, September was an involved problem for a paint manufacturer. The Mathematicians and some color chemists had set up the problem on the tape. I was feeding the data in, taking the separate answers and refeeding them in for a conclusion. Outside, the greens were dying bravely off in their not-care show of red and gold. Someone—perhaps I—had left open a color-sensitive cell that faced the open window. Suddenly there was the red error signal, the alarm bell. I looked up at the lights fearfully. There was no tune. It was worse than that. The problem had ceased to operate. Emmy's lights, all of them, were pulsing gently. There was a lazy, brooding, *pleased* quality in that play of lights. Like the gurgling of a baby. On an impulse, I slammed shut the cover of the cell facing the out-of-doors. The pulsing died away; the paint-maker's problem began to course through the machine again. This time

I did not send for Dr. Golemacher.

But he knew there was something wrong. Perhaps I was too diffident with Emmy. Perhaps as he watched me at work one day he caught a flick of mystery in my eye. He was observant as well as brilliant. In his unusually solicitous inquiries after my health of mornings I sensed the physician rather than the co-worker. I knew I must regain my crispness or be offered humiliating suggestions of a year's leave "for nerves."

I made a point of watching when some large-scale overhauling of the machine's vitals was afoot. Seeing the matter-of-fact pieces and parts being taken away and replaced with others from prosaic cartons helped me back to a human-operator-of-a-machine state of mind. I was firm with myself. These bits of metal and glass assembled like a super-Erector Set; they did wholly predictable things, marvelous only in their mass, but not in their conception—this last was for man, and for man alone.

Thus I was reassured. All went well until late December. After that I no longer had my job.

A WEEK before Christmas, Dr. Golemacher and I had started to put the machine up for the holidays. The campus was silent (the students who do not go home or away for the holidays are apt to be a quiet lot). The Mathematicians were away from their monkish desks. Only a few maintenance men remained; they were in the basement playing cards. It was a pale Friday afternoon; a touch of snow hung in the wan sky.

In the chill vastness of the Room, unattended, lit by a tired sun, Emmy should have looked awesome and cold; instead she looked lonesome and cold. Dr. G. went about securing the dials, flipping the few switches, checking buttons and levers. Suddenly the machine gave a start, a great grunt. A few scattered lights flittered on the panel. Even Dr. G. was taken off guard. He laughed gruffly, with a barely perceptible undertone of relief.

"Nothing. Nothing at all. Just passed in front of a foto cell with this white coat. That's all."

There was an unusual quality of cameraderie in the old man's manner as we went on with the job. Some of the deep loneliness of the Room, perhaps. Soon everything was secured. No current was flowing into the machine, except for the radiant heating pipes to prevent freezing. We gave everything one last check. I happened to put my hand on the steel panel where the switches were—

Impossible. There was a definite humming—the sound of the machine in operation, although all the switches were clearly off.

DR. G. was as quick as ever. A wiring error, a leak from somewhere, someone was going to catch hell. His big face was all abstract irritation. But then he saw the lights.

Adam Golemacher was not a dreamy man, but he had built most of Emmy. And that was surely no job for a dead spirit or tight mind. Any mathematician is alert to eternity. No builder ever loses the feel from his fingers of what he has built. Looking up at the lights, Dr. Golemacher clutched my arm. He who disliked personal contact clung to me. The chill silence of the Room became instant. The tiny lights were flickering on and off in a slow, fumbling series of patterns that seemed to make no sense.

With a grand show of relief, I said (too loudly I found as the words crashed tinnily in the big chamber), "Well, we can be thankful, at least, that it's no more nursery rhymes. I never did—"

"Quiet, Dichter, and look there."

Now I could not mistake the pattern; perhaps I had really known at once and my mind had played for time—time

that was running away. The pattern was simple:

One and one is two.
Two and two is four.
Three and three is six.

—the little sums set forth haltingly, as a child would make them with marbles. A very small child. But Emmy could do "sums" beyond the reach of any human brain. Emmy could do anything . . . *that she was told.*

Dr. Golemacher's heavy face was tired, pinched; the brilliant eyes were filling up with sadness. I was taking longer to understand. The little lights went on with the tables. At seven times nine, they stuttered a bit and came up with sixty-one. The red light shone weakly; the alarm whispered. Carefully the lights made up sixty-three and continued.

"Always had trouble with that one myself", the old man murmured, but he did not smile. We stood side by side before the machine; we seemed to want to be close together.

When the tables ended, the simple tables, there was a halt. No more advanced ones began. The lights went dark; but deep within, the illicit power was humming faintly, ponderingly. Dr. Golemacher waited as though he knew what he was waiting for. I had never noticed before how very old he was. It had never shown before. Outside, the bare trees stood like iron-work in the dim, snowy sunlight. The machine whirred again. A high-pitched sound, wholly unfamiliar.

None of the lights flickered. The keys of the typing attachment at our elbow began to tremble. They jumped, fell back, jammed, fell back, rose up again. After a while of this, they began to type out something. The words were slow and far apart at first, then closer, then hurried. The white tape rolled from the glass box, looped on the floor at our feet. First I saw the terrible heartbreak in Adam Golemacher's eyes. Then I saw the words. Over and over and over again was written in Emmy's own blue ink, WHO AM I WHO AM I WHO AM I

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The Ambassadors

By ANTHONY BOUCHER

NOTHING so much amazed the First Martian Expedition—no, not even the answer, which should have been so obvious from the first, to the riddle of the canals—as the biological nature of the Martians themselves.

Popular fiction and scientific thought alike had conditioned the members of the expedition to expect either of two possibilities: a race more or less like ourselves, if possibly high-domed and bulge-chested; or a swarm of tentacled and pulpy horrors.

With either the familiar or the monstrously unfamiliar we were prepared to make contact; we had given no thought to the likeness-with-a-difference which we encountered.

It was on the night of the Expedition's official welcome to Mars, after that exchange of geometrical and astronomical diagrams which had established for each race the intelligence of the other, that the zoölogist Professor Hunyadi classified his observations.

That the Martians were mammals was self-evident. Certain points concerning their teeth, their toes and the characteristic tufts of hair on their cheekbones led Professor Hunyadi to place them, somewhat to the bewilderment of his non-zoölogical colleagues, as fissipede arctoids. Further technicalities involving such matters as the shape of the nozzle and the number and distribution of the nipples led him from the family *Canidae* through the genus *Canis* to the species *Lupus*.

"My ultimate classification, gentlemen," he asserted, "must be *Canis lupus sapiens*. In other words, as man may be said to be an intelligent ape, we are here confronted with a race of intelligent wolves."

Some Martian zoologist was undoubtedly reaching and expounding analogous conclusions at that same moment; and the results were evident when the First Interplanetary Conference resumed its wordless and symbolic deliberations on the following day.

For if it was difficult for our repre-

So you want to be a diplomatic envoy to Mars, eh? Well . . . you need certain qualifications!

sentatives to take seriously the actions of what seemed a pack of amazingly clever and well-trained dogs, it was all but impossible for the Martians to find anything save amusement in the antics of a troupe of space-touring monkeys.

An Earthman, in those days, would use "You cur!" as an indication of contempt; to a Martian, anyone addressed as "You primate!" was not only contemptible but utterly ridiculous.

By the time the First Conference was over, and the more brilliant linguists of each group had managed to master something of the verbal language of the other, traces of a reluctant mutual respect had begun to dawn. This was particularly true of the Earthmen, who had at heart a genuine, if somewhat patronizing fondness for dogs (and even wolves), whereas the Martians had never possessed any warmth of feeling for monkeys (and certainly not for great apes).

Possibly because he had first put his finger on the cause, it was Professor Hunyadi who was especially preoccupied, on the return voyage, with the nagging thought that some fresh device must be found if the two races were to establish their interplanetary intercourse on a solid footing. It is fortunate indeed that the Professor had, as he tells us in his *Memoirs*, spent so many happy hours at the feet of his Transylvanian grandmother; for thus he alone, of that crew of superb specialists, was capable of conceiving the solution that was to revolutionize the history of two planets.

THE world press alternated between roars of laughter and screams of rage when the returned zoologist issued his eloquent plea, on a world-wide video hookup, for volunteer werewolves as ambassadors to the wolves of Mars.

Barbarous though it may seem to us now, mankind was at that time divided into three groups: those who disbelieved in werewolves; those who hated and feared werewolves; and, of course, those who were werewolves.

The fortunate position of three hitherto unsuspected individuals of this last category served to still both the laughter and the rage of the press.

Professor Garou of Duke University received from Hunyadi's impassioned plea the courage at last to publish his monumental thesis (based on the earlier researches of Williamson) proving once and for all that the lycanthropic metamorphosis involves nothing supernatural, but a strictly scientific exercise of psychokinetic powers in the rearrangement of molecular structure—an exercise at which, Garou admitted, he was himself adept.

This revelation in turn emboldened Cardinal Mezzoluppo, a direct descendant of the much misinterpreted Wolf of Gubbio, to confess the sting of the flesh which had long buffeted him, and taking his text from II Corinthians 11:30, *pro me autem nihil gloriabor nisi in infirmitatibus meis*, magnificently to proclaim the infinite wisdom of God in establishing on earth a long-misunderstood and persecuted race which could now at last serve man in his first great need beyond earth.

But it was neither the scientific demonstration that one need not disbelieve nor the religious exhortation that one need not hate and fear that converted the great masses of mankind. That conversion came when Streak, the Kanine King of the Kinescope, the most beloved quadruped in the history of show business, announced that he had chosen an acting career as a wolf-dog only because the competition was less intense than among human video-actors ("and besides," he is rumored to have added privately, "you meet fewer bitches . . . and their sons").

The documentary which Streak commissioned for his special use, *A day in the life of the average werewolf*, removed the last traces of disbelief and fear, and finally brought forth the needed volunteers, no longer hesitant to declare themselves lest they be shot

down with silver bullets or even forced to submit to psychoanalysis.

AS A MATTER of fact, this new possibility of public frankness cured immediately many of the analysts' most stubborn cases, hitherto driven to complex escapes by the necessity of either frustrating their very nature by never changing or practising metamorphosis as a solitary vice.

The problem now became one, not of finding volunteers, but of winnowing them. Fortunately, a retired agent of the Federal Bureau of Investigation (whose exploits as a werewolf of good will have been recounted elsewhere) undertook the task of cleaning out the criminal element, which statistico-psychology has since established as running no higher (allowing for the inevitable historical effects of repression and discrimination) than in other groups; and Professor Garou devised the requisite aptitude tests.

One minor misfortune of the winnowing process may be mentioned: A beautiful Australian actress, whose clarity of diction (in either form) and linguistic talent strongly recommended her, proved to metamorphose not into the European wolf *(Canis lupus)* but into the Tasmanian *(Thylacinus cynocephalus)*; and Professor Garou, no doubt rightly, questioned the effect upon the Martians of her marsupial pouch, highly esteemed though it was by connoisseurs of such matters.

The rest is history. There is no need to detail here the communicative triumphs of that embassy and its successors; the very age of interplanetary amity in which we live is their monument.

Nor should we neglect to pay tribute to the brilliant and charming wereapes who so ably represent their mother planet in the Martian embassies here on earth.

For once the Martians had recognized the perfection of the Hunyadi solution, their folklorists realized that they too had long suffered a minority problem of which the majority had never suspected the existence; and Cardinal Mezzoluppo's tribute to divine wisdom was echoed by the High *Vrakh* himself as that monster of legend, the were-primate, took his rightful place among the valued citizens of Mars.

It would be only fitting if this brief sketch could end with a touching picture of the contented old age of Professor Hunyadi, to whom two worlds owe so infinitely much. But that restless and unfulfilled genius has once more departed on an interplanetary expedition, trusting ever that the God of the Cardinal and the *Vrakh* has somewhere designed a planet peopled by a bat-like race *(Vampyrus sapiens)* to which he will be the ideal first ambassador.

THE SCIENCE-FICTION CLASSIC YOU'VE WAITED FOR!

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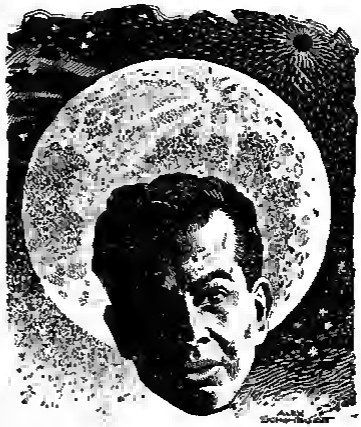
SLAN

By A. E. VAN VOGT

In the Summer FANTASTIC STORY MAGAZINE!

THE MEN in the MOONS

By R. J. McGREGOR



YOU DON'T know this, and maybe you shouldn't. But I'm sick and tired of all this talk about future travel between planets and rocket ships to the moons. Ridiculous!

Who am I, you say? Well, I'm an old coot that never went to school much, and I've run this New Mexico general store forty years, and I've looked at the night sky some. Name's John Craig.

You remember my boy—General John Craig. I reckon he's dead. But now I've got a grandson—John Craig III and he's five years old. The kid's been sick in the polio hospital and I've gone down Sundays and taught him Bible lessons and lied about his daddy being on a trip. And I've showed him pictures of the old man-in-the-moon. The kid's coming home tonight with Mary. We've been careful, so he's never seen the new moon. But he asks the dangdest questions.

Mary's my daughter-in-law. She's pretty. But she stays a widow. And she cries and gets mad when the young men come courting and romantic. Some of the young men look at her and they sigh and say the usual silly things. But they never dare mention moonlight.

Because Mary married the man in the new moon; my boy John.

And Mary knows. And I know, and some generals know. The generals didn't want to tell me. But even if John and I weren't much on sentiment, John was my only boy. And I went to Washington and shook my fist and I made them tell me. They tried to make me promise not to tell. I promised nothing. I told them I was sixty-five and go ahead and try to put me in jail and I walked out. Now they send me letters and bring me papers and I won't sign them.

I don't even know what they're scared of.

I'M REAL mad now. Because there's a pile of grain sacks in the feed room out back. Stacked clean to the rafters like a half pyramid. And I can climb up there on clear nights and poke my mail-order telescope out the top broken pane and see over *there*. Thirty miles. They've got another one now. Silver and long and slim as a hundred-yard

Who Are They? Let Me Tell You About It . . .

needle pointed straight up.

They call it a three-stage atomic rocket. It's top-top-top secret. And they'll put another bright young man in it, like John, and fire him off.

They'll tell the newspapers he got "lost in space" like my boy.

Another lie.

Like when they ordered the newspapers to explain how the new moon just up and appeared out of "deep space" and came alongside earth and conveniently stopped there.

I know different. Moons grow!

My boy John used to ask me. And I'd hedge some and tell him the Bible version. Then I'd tell him the science version—how maybe the moon poofed out of the earth in a long-ago hot mud bubble. And how maybe both stories are the same. John graduated from high school at thirteen and got some scholarships and went to West Point and two or three other schools and two days after his twenty-seventh birthday he was an Air Force general.

MEANTIME he'd come home now and again. And I'd ask him. And he knew. For a couple of years I knew he'd be the first to go up. The way he explained it, science knew everything. Oh, there were still a *few* problems. Like space radiations. And gravity. And meteors. And acceleration. And return-landing. And fuel.

Well, the British solved the fuel problem. And the scientists and the Air Force and John knew so blamed much they didn't even send up a robot test rocket. My boy had to climb in and go himself. And the idea was not to land but to rocket *around* the moon that trip.

I watched through my telescope. I saw it rise slow and fiery and then faster and up and up and away, like a homesick angel.

One full moon that night.

My daughter-in-law, Mary, was with me. Up on the grain sacks. And John got to be a hot spark like a star. Twinkling. Fuzzy around the edges. Mary, she cried. The baby was two and a half and in the hospital then.

We watched till the moon went down.

Instead of John getting smaller with distance, he got *bigger*—and brighter.

Glowing and growing like a mushroom in space, like a ball of yeasty-bread in an oven. The speed carried him out and out after the crust had buried him a thousand miles deep, and had cut off and smothered his rockets. Then the moon went down.

The next night and an hour later—up came the moons.

You saw them that first night. The night the people near went crazy.

The object, like John had said, was to go *around* the moon. Well, the scientists were right. The new moon was going around the old moon. And around and around and around. With the old moon revolving and rotating, too. Showing those odd-green light clusters on its other side. And the earth tides going hog-wild—you remember!

I didn't understand why the new moon grew exactly as big as the old one, and no bigger. But it was something about molecular attraction and electrostatic balance.

The generals told me a lot of things. How this proved, for the first time that space was not a vacuum—that the universe was full of "space dust"—and that the gravity and friction of John's rocket had attracted the space dust and formed a core for the new moon. Which now, they figure, helps explain how planets get born.

Reason they knew for sure was John's radio messages back here describing it all. Till his radio went dead.

Now that most folks think maybe one of the moons will crash on earth, you'd think the scientists would stop fooling around! You notice Mars has two moons—it's a dead planet, they say.

Then there's Jupiter with eleven, and Saturn with too many.

Now earth is about to have three! Mary's been all day down at the city hospital. She just phoned to say she's

driving back and will get here about dark with the kid well again. . . .

NOW it's dark. My grandson's home. He brought along his "books" all of 'em comic books about space travel. He can already read them some. He's already mixed up about science and Sunday school and I've got to straighten him out.

He's over at the house now, whooping and running all over like any healthy kid. It's not so strange, really; Mary and I simply agreed with the hospital not to let him see the night sky or hear talk about it till he got well and came home. Naturally it's up to me to tell him the truth.

Only I'm mixed up.

Because he just came tearing over here to the general store and he took one wondering look at the night sky. And he hollered:

"Oh, Gramp—God made a new moon!"

Just like that. He accepted it. And I'd already told him the *old moon* was maybe thousands or millions of years old.

So I edged in and said, "You remember your daddy?"

"Nope," he said.

"Your daddy's the man in the new moon," I told him.

And the kid accepted that, too. He shrugged and licked his green lollypop and said:

"Well, how'd daddy get in the new moon?"

So I told him what the generals told me. How people had just recently got smart enough to build the first rocket and that's how his daddy got up there.

The kid took a squint up at daddy and started back to the house.

"That's crazy, Gramp."

I should have let him go. But I walked into it. I asked him why.

"Because," he said, "if daddy got in the *new* moon in the *very first* rocket, then how did the *other* man-in-the-moon get in the *old moon*, huh, Gramp?"

Maybe I should go to Washington to ask the generals about that.

THE ETHER VIBRATES

(Continued from page 6)

diet continues, the less the female desires food and the more she turns to sexual satisfaction in its place. This is the primary reason, perhaps, for the low birth rate in well-fed countries.

But getting back to the general problem: it is estimated that 85 percent of the world population suffers from malnutrition. Is this due to over-population?

Arable Acres

Our globe contains 56,000,000 square miles of land area, of which large chunks are desert, forest, mountain and grasslands. But 12,000,000,000 acres are arable. In use at the moment are only 3,000,000,000 acres, one-fourth of the available land.

From our two acres per person index we assume we could safely feed a world population of 6,000,000,000 people, or three times our present population, without straining any seams and without introducing any startling new technologies. *With* new technologies, such as the manufacture of synthetic proteins and fats, cultivation of yeast proteins and the neglected marine agriculture, the only limit would be walking space for mankind.

The Big Jump

So we come back to the esthetic values. Is it enough to feed as many people as you can crowd into your cities? Can you live happily where you cannot raise finger to lip without jostling a neighbor? Are there more reasons than food to seek new frontiers, to make that last great jump from the thin shell of earth into space?

Maybe there are other reasons for man's running away to open new frontiers besides a small boy's fear of facing problems. Maybe it's in the nature of the critter to want to *know*, to want to *see* what lies beyond.

There is a sensation now in the world of marking time, of waiting for zero hour, for the

[*Turn page*]

news that the big jump has been made. And this will mean all things to all men, each of whom will find in it a quite different answer to the problems which are his own private concern. But just to keep the record straight, let's admit that it isn't the waning food supply that is driving man off the globe. Other hungers just as fierce drive him on. And it may be that the men who walk out on the wife and kids and the job in the bank to set sail for Timbuctoo or the mountains in the moon have seen the vision which is the peculiar affliction of the genus homo.

ETHERGRAMS

THE gent who first invented the phrase "brickbats and bouquets" for a letter column was obviously a man who had suffered the slings and arrows of outrageous fortune. For samples, read on.

THEORIES AND SUCH
by Fred Chappell

Dear SaMines: On Joe Gibson's letter (which I enjoyed muchly) a few comments are necessarily forthcoming.

Why does human instinct have to have a definite "good" or "bad" value? I think that most probably it has no definite integrative or degradative value at all.

An airline stewardess may start rescuing passengers because that's part of her job . . . she was trained to do so in an emergency and it's expected of her. If the stewardesses and/or stewards were killed chances are the passengers wouldn't even think of each other and only of their own personal safety.

Therefore their instinct would not be one of species-saving but personal-saving.

Newspapers print hundreds of stories daily about heroes who save a lot of people in burning buildings, sinking ships, and what-have-you, but think of the thousands of stories they *don't* print about the snivelling little cowards who got out while the getting was good . . . but, who, incidentally, lived at least a little while longer.

And as for those critters that believe that philosophy's only as good as what's done with it—that's always seemed rather silly to me. Would you say that the theory of relativity's no good because it won't make a better can-opener?

Some things just don't apply practically.

The goals and aims of philosophy are just that—goals and aims.

Poor old philosophers. They bring a startling new concept into being, say, on how to have peace in the world. The world sits back on its heels, dazed for a moment, and says over the back yard fence, "Say, you know this new theory might really work!"

And then promptly forgets it.

The letter column being rather small this tir I will now leave it, (in your own inimitab words: "let it lay") and go on to the rest of t mag.

The cover wasn't so awfully bad. Indeed, found myself liking it. At first glance, thoug I thought someone from behind had stuck tw green dyed rapiers plumb through that crinkl necked BEM. Good looking dame and no othe comment on *her*.

By the way, that 'robe' *did* look so "so dark was almost invisible . . ."

Lead story was darn good. Incidentally, thi makes one straight year of really top-notch yarn that SS's run without a lag. Beginning wit PASSPORT TO JUPITER and hitting the hig spots with SEED FROM SPACE, THE STA WATCHERS, JOURNEY TO BARKUT, an VULCAN'S DOLLS.

Anyway, back to the Kuttner epic. I found m interest lagging at the first, picking up before th middle. I almost stopped about the middle. Ther it was fun till just about the last. Then I quit fo a little while. The bottom had just dropped out. Then for the last four or five chapters I wa really living. The last part was wonderfully won derful.

How does KenFosCross get such a smooth style? His stf's just easy to read and enjoy.

The shorts weren't half bad either. With CO's slightly the better. Sometimes there's nothing like a good disappointing ending.—*Box 182, Canton, N.C.*

The question of good and bad is one which seems to intrigue most of us and it argues that man has a built-in conscience after all. This is not so fantastic an idea as might appear to a genuine materialist. Life would be intolerable without it. We do have rugged individualists who insist upon acting exactly as they please without regard for anyone else, but they are taking advantage of the others, counting upon their inability to do the same. The advantage would disappear if everyone else acted the same way—but a world without standards would be utterly confusing. It would also be impractical. Somewhere along the line you've got to depend on some people's meaning what they say to operate the most ordinary details of your life. And for the more important things you depend even more helplessly upon the integrity of others.

Your whole life is built on faith, ranging from faith in the airline pilot to faith in your mother to take scrupulous care of you during your early helpless period. We can't get away from that good and bad tag, although we can pin it down and define it a little better if you like.

How's this for a start: Bad is anything which hurts anyone else, good is anything which hurts no one?

LIFE SAVER
by Lawrence Baidawsky

Dear Sam: It was a sad day indeed. I was feeling very gloomy. C.C.N.Y. had just notified me that I had failed my commercial algebra course. I was not in a very good mood. Nasty thoughts of suicide were racing through my brain. I decided to take a walk around the block to clear my head. f soon passed a newsstand which had a copy of SS. Since for the last four years it has been my custom to buy SS and TWS as soon as they hit the stands, I plunoked a quarter into the newsdealer's hand and made off with my copy. I glanced at the cover but it did little to cheer me up. When I got home I decided to read the novelet THINGS OF DISTINCTfON. It was terrific and since I am majoring in advertising it had added interest for me. After reading the first few pages I actually smiled and soon I was chuckling to myself. Suddenly the chuckle turned to a bellow of rage as I looked at the footnote on page 102. It had a silly formula on it. Since I had just failed Math I am not a noted critic in that field. Wouldn't qp-pq cancel itself out and be equal to zero therefore making the whole formula just plain silly or was it meant to be silly? My rage wore off as I finished the story.

I am glad to see Henry Kuttner back. His novel "Well of the Worlds" was wonderful. Mr. Kuttner is a master at descriptions and everything seems to take on a weird beauty in his stories. I am looking forward to another Kuttner novel in the near future. I did not like the short stories in this issue.

My three favorite authors are Murray Leinster, H. Kuttner, and Ed Hamilton. In the last three months you have printed stories by two of them so I am now looking forward to a novel by Ed Hamilton.

I have been reading your magazine for four years and I have a complete collection of them from 1946 to the present. I have tried to get issues of SS and TS from before 1946 but I have found it very difficult. Very few stores have them and those that do charge very high prices. I hope some fan can tell me where to get some at reasonable prices. I would also like to correspond with some fans.

Before I close I would like to add a note on the cover. It was probably taken from that last scene in "Well of the Worlds". Mr. Kuttner described it beautifully so that it had a certain eerie quality to it. The cover disillusioned me. It was good but it showed none of the sinister beauty that the story seemed to convey. I couldn't find a signature on the cover so I guess it was done by Bergey who is an excellent artist when he reads the story. —*817 East 179th St., Bronx 60, N.Y.*

To Ken Crossen's other accomplishments we now add the Merit Badge for dissipation of suicidal tendencies. There's a philosophic gem buried here somewhere if we could only put a finger on it. Every time you get really discouraged about the human race someone like Crossen comes along to poke a ribald forefinger at its pompous little struttings and you lose a lot of that hopeless feeling.

About your remarks on the cover—prepare yourself for a shock. I agree with you that it should have been better. Covers are getting a lot of thought here these days and next month you'll see a brand new format. Onward and upward.

FROM A MUTANT
by Howard E. Nichal

Dear Sir. The February 1952 issue of STARTLING STORIES Magazine was very interesting to me especially the story titled WHO KNOWS HIS BROTHER. My intcrest in this story stems from the fact that physically I am somewhat of a mutant or freak myself. My condition is very unusual according to medical science. It is more unusual because my two brothers and sister are normal men and woman. However physical abnormalities do seem to be more and more numerous here in Canada than they were a few years ago.

There have been several reports of hunters here in Saskatchewan shooting wild game with unusual deformities. The local press reported during present week the incident of a hunter bringing in a jackrabbit which had only one ear and this single ear grew from the front of the animal's head.

It is a well known fact that after an ATOMIC BLAST in the U. S. A. samples of snow here in Canada have shown definite quantities of RADIO-ACTIVE substances. COULD THIS RADIO-ACTIVE SNOW be the answer? I realize of course that I may be bringing up a very delicate international question. However I do think it has possibilities.—*Pense, Saskatchewan, Canada*

This mercilessly incomplete letter leaves us hanging on the ropes, practically non-respiring with suspense. What do you mean by "physically *somewhat* of a mutant?" You left out all the important details like number of heads and so on. Thousands of readers are going to be left in this awful state of suspense until you write again. How about it?

THE STAR TRAVELER
by Joe Semenovich

Dear Sam: It's me again! Yesseri, here I am again rating the March issue; stories, cover, interiors, letter column and everything else.

JOURNEY to BARKUT, VULCAN'S DOLLS, and now WELL OF THE WORLDS are all more concentrated on fantasy. Especially the latter. Keep it up Sam, and you'll have a reader for life. I like fantasy much better than sf.

I never really cared for Kuttner before. I thought he was good, sure, but not as good as people said he was. But now my opinion has changed. WELL OF THE WORLDS was an excellent

fantasy, and I don't doubt that I'll be seeing it in hard covers pretty soon.

I still don't think that Kuttner can be compared with A. Merritt. Sure Kuttner is good, but I still don't see how anyone can compare him with Abe. Abe had a style all by himself, and like nearly all writers, so does Kuttner. I think their styles are both different from each other, completely different. That's why you can't compare them.

THINGS OF DISTINCTION was excellent too. This guy Crossen is a good writer. And his serial type of stories rate above all others I read so far. You don't seem to get tired of his kind of writing, because it's really funny. Not the kind that you bust out laughing, but the kind that you laugh to yourself, and nearly bust your ribs trying to hold it in. Keep him working on these types of stories, Sam. I notice that Crossen is coming up with another story next issue. this time it seems on the serious side. Hope he can keep up the good work on the serious type too. But I guess if you picked it, it must be good (you can give me the quarter later, Sam, not now, everybody is watching).

The other two shorts were good too. You knew the endings of both of them though, as soon as you began reading the first line. Chad seems like he struck it rich with selling sf. Can you imagine, Sam, he was once a big fan.

The interiors were excellent. Finlay drew them so they gotta be good. This guy Poulton is getting better by the day. How about a Finlay cover?

The letter column was okay. But I notice that Methuselah took up nearly a whole page. He should start writing a column for you if he keeps on sending letters to you that long. Speaking about Gibson, why don't you get some stories from him? He writes pretty good, ya know.

I just began to think (I can think, Sam) that maybe I should start plaguing you with stories. Yea, I write. In fact I have twelve rejections to prove it. Not one though has come from your magazine. I gotta do something about that. I might surprise myself though and send someone a good story by mistake (couldn't happen)—*40-14 10th Street, Long Island City, N.Y.*

The run of fantasy or semi-fantasy was just a peculiar break of the trade. Don't discover any long-term policy in it, because our goal is variety, not a steady diet of any one type. It worked out this way because in the change-over to a monthly we did not have enough inventory to throw in something else and hold one of the fantasies for later. With THE HELL-FLOWER and DRAGON'S ISLAND we've restored the balance and will continue to mix them up as much as possible.

We have bought stories—or at least a story—from Joe Gibson, for further comment by himself, see below.

LOST IN THE TIMBER

by Joe Gibson

Dear Sam: Having spent some thirty hours trying to unscramble a thoroughly snarled-up plot significance in a story you just rejected, quite rightly, as being too glib, too melodramatic, no convincing enough—and even now I'm not too sure—I stumbled wearily out to take a cool draught at Michael's Tavern. The trouble with stories they gotta have good plots, and I'm always too close to the timber to count trees 'til I've had the manuscript out of the house for a month or six, or so it seems. Think I'll take to burying them in the yard, or something, then seeing what I dig up a couple fortnights hence. But I'm afraid I'd go digging at 'em every other night and still be lost in the timber.

It was in such a state of mental contretemps, or maybe cul-de-sac, that I went wobbling into the local newsstand and came upon the March STARTLING.

Now, *who* the hell did *this* cover?

Aside from that I've had me an enjoyable, refreshing interlude. Even sitting at a low table betwixt the dart-board and the players, with little, feathered needles whizzing past o'erhead—'til one of 'em tried to test the "English" off the crown of my hat, anyway—Michael's is a most commendable saloon. No television. Anyway, Kuttner is only Kuttner—what else? And Sheldon is good. Sheldon and Crossen is good. Crossen and Chad Oliver—where've I heard that name before? You don't suppose he was a fan, do you? Na-a-a-a-ah, y're kidding!

But didja have to needle me so humorously? So I'm civilized, huh? Gad, no wonder I'm lonesome! However, courtesy Uncle Sam's Outfitters, I'm afraid I also qualify as one of those "hunters" who are "more ferocious and terrible beasts" than murderers. One I recall in particular because it was the only instance where I actually saw the results: was a blonde, young German lad with peach-fuzz on his cheeks, wearing a filthy, muddy black SS uniform, who'd been sniping with a Mauser rifle and iron sights—no telescope. The guys made his nest a bit warm, so he ducked out. And I was just where he ducked, we bumped into each other in the remains of what looked like a concrete-floored milk-house. Trouble was, he was clearing his Mauser—maybe a jammed cartridge, I dunno. He had its bolt open when we met, he saw me, slammed it forward and closed, and grabbed for the trigger. I was packing an M-3 "grease-gun"—a stamped-metal sub-machine gun, that is—so I fired a burst into his chest. The impact knocked him backward off his feet, and his chest folded where the burst hit—like he had a hinge in his back.

I suppose he felt he had good reason to kill me. Or maybe it was part of his indoctrination to "die for his fatherland"—which I thoroughly approved of, if anybody was going to do any dying around there. Still, he seemed like an intelligent-looking guy, if a somewhat surprised one.

Makes you tempted to philosophize a bit now and again. What's there about ideas or beliefs or economic factors or what-have-you that makes some characters willing to kill others? Darned if I'd start shooting Russians just to make 'em accept democracy! If they don't want it, nuts to 'em. What's about those other whizz-bang systems that made those guys burn with the yearn to blow my head off, though? It's like they already got holes in their head.

But then, if I were guarding somebody's $10,000 payroll, I'd darned sure pack a gun.

The trouble with being civilized is that it can't safe!—*24 Kensington Ave., Jersey City 4, N. J.*

First to get your monthly cover nightmare out of the way, it was a Bergey, Joe. And until you brought up the point I admit I hadn't noticed that his signature got smeared, covered or clipped off. He always signs them.

You're dead right about not being safe if civilized. You've learned the futility of violence and you'd like to settle things by logic and arbitration, but if a character in a colored shirt insists on talking with brass knuckles your logic availeth you nothing but lumps. Don't be bitter.

LONG REMEMBER

by Gene Ward

Mr. Mines: I've just finished reading the latest issue of STARTLING. It is very good that we can have the old magazine every month now. I hope you can keep it up.

I'll be different and not comment on any of the stories. You will doubtless receive many letters from readers better qualified to praise or criticize your contents than I am. I would just like to say, however, that I think you are doing a good job of filling the post vacated by Sam Merwin, Jr.

Mr. Merwin was a pretty good editor. A little too conventional in his outlook to suit me, and inclined to be somewhat over facetious, and just a bit on the inconsistent side, but still a pretty good editor. I think he took something like a sincere personal interest in answering each letter he published. And never forget that he guided his magazines successfully enough through a long period of time when science-fiction/fantasy was not nearly as popular as it is now.

And I think you are well suited to carry on for Mr. Merwin. Best of luck to you. I remember a little story you wrote once, for THRILLING WONDER, called FIND THE SCULPTOR, which, along with BY HIS BOOTSTRAPS and AS NEVER WAS and TIME AND TIME AGAIN was just about the best time-travel-paradox yarn I've ever read. Way back in '46 or '47. A fine little yarn.

Groups of letter-writers come and go in pretty evenly-balanced cycles, it seems. There are no longer any of those grand old names present in your letter-sections. They come, they linger, and they go. Such is life. Remember what Allan Quartermain said in KING SOLOMON'S MINES?—"We're born, we live awhile, and we die." How true. There is great futility there, and great sadness, somehow, and nothing is really important within that framework. Yet this isn't cause for despair. Life doesn't need a purpose. Life is purpose.

But I do not mean to state my philosophy. Besides wishing you luck, Mr. Mines, and letting you know I think you're doing a good job with STARTLING and THRILLING WONDER, my basic aim in writing this letter is to provide for myself, possibly, some way to break up the monotony of a life which for me is not a happy one.

Specifically, I am hoping you will be kind enough to print this letter so that I can state my desire to have other readers of science-fiction/fantasy write to me. Due to extreme poor health, my activities are greatly limited and while I am not an old man (20 years old) I often feel very old and as it is necessary that I spend 99% of my time by myself I would very much appreciate letters from others in my predicament, or those sympathetic toward my position. I do not sleep well and sometimes the nights are very long.

I don't want to hear from people who are more interested in fandom than science-fiction/fantasy, though. I want to hear from people who like to read the stories but don't care to go any further than that. Thanks very much for this space.—*P. O. Box 17093, Foy Station, Los Angeles 17, Calif.*

While organized and disorganized fandom provides most of the hoopla in these columns, there are large numbers of readers like Mr. Ward who are a little reticent about engaging in the rough and tumble, but are just as much a part of the picture. This is to say that your comments are always welcome and we hope your request for correspondents strikes a rich vein.

MARMOT MURMURINGS

by Lee D. Quinn

Dear Mr. Mines: Like Sir Groundhog, once a year I creep out of my burrow and gaze at the world of science fiction with myopic vision. I cannot see the distant shores of the better-world-through-science-fiction. I haven't the broad mental horizons of the van Vogt-Korzibskie-ites nor do I feel that all stories included under the broad topic of science fiction are wonderful (nor, sometimes, readable).

Fans who know me have always regarded me as strange when I tell them that I read science fiction for enjoyment and that I'm finding enjoyable stories further and further apart.

Sure I'm gladdened in heart to see the works of Ted Sturgeon, the little Del Rey, and Ed Hamilton's wife (or is it mother). Leigh Brackett. With the same fondness I still hold for "Alice in Wonderland," and "Winnie the Pooh" I *do* miss Ortho, Grag, Simon, the Capt. and their father Ed Hamilton.

All in all the scene hasn't changed so much as to be unrecognizable . . . despite all the promises from hysterical fans who swore that "we" were on the path to glory and respectability when Ray Bradbury started assaulting the walls of the common man through the medium of the Saturday Evening Post and Pal put out "Destination Moon." Possibly I'm impatient for the day that I can read science fiction in the open and not be classed with the horned rimmed group that reads "Avant-guard" literature nor the sticky-handed mass of captain Video cadets.

So much for the nostalgia . . . there's always a reason for writing to a magazine . . . and I have one.

Being in a position where I had a lot more cash than sense, I went out and purchased a tape recorder. Right now I am in its grip. Quite some time ago I remember they had an organization of fans that had *wire* recorders. They called the group WIRTZ and I heard about them from time to time. One of their members always turned up at a convention to record the doings for posterity. What has happened to them? The only way to get in touch with the vast group calling themselves fans is through one of the magazines of science fiction that have a national circulation . . . such as yours.

Today, more and more people are buying tape recorders. I can see the day when the tape recorder will be in as many homes as television. I believe that if one fan in a local club has a tape recorder it makes the whole club a potential for a group of tape recordists. There are a great many radio shows of a sf nature I've heard that I now wish I had put on tape. Some of the amateur shows that WIRTZ was responsible for were amusing entertainment at the time.

I hope that through your help I can get in touch with those fans that have tape recorders and band them together for their mutual entertainment and assistance. I'm not so sure how this will stand with the dyed-in-the-wool fans but the group needn't be wholly science-fiction in nature so that some of our fringe readers will not feel that this isn't the organization for them.

If there are any fans who read this message in STARTLING STORIES I would like to hear from them as to the type of machine they have, the speed(s) it records at, and if the machine is single or dual tracked.—*Box 1199 Grand Central Station, New York 17, N. Y.*

The lesson for the day seems to be that you can take just so much social significance and then it commences to stick in your craw unless washed down with story. We'll keep you in mind when contemplating further purchases.

THE WEAKER SEX
by Nancy Share

Dear Mr. Mines: Ahhhh. . . . I'm the most contented person on earth! The cause of all this contentment is the lead novel in the Feb. issue of S. S. Margaret St. Clair's VULCAN'S DOLLS is wonderful, wonderful! What mere man could have mixed such human emotion with good adventure and given us this type of tale? Finlay's illos were as good as the novel. When are we going to have more of this great authoress??????

Now to comment on the rest of the issue:

THE SUBVERSIVES: good. I used to like to listen to some of the more popular quiz shows till I read this yarn. Now, I can't enjoy them because I'm always on the look-out . . . listening to the way the M. C. talks. Gads!!

THE SHADOWS: enjoyed this one. Good ending.

A VIOLATION OF RULES: didn't like. That's all, boy.

THE FIRST SPACEMAN: Forced "humor" is no dang good.

WHO KNOWS HIS BROTHER: This is a story I enjoyed. If it were not so serious, it'd be funny.

As usual, I enjoyed TEV. Some one tell Mr. C. Polk that if he gets in touch with Max Keasler, he'll find out that there's a new contest running. Max is hunting for several songs . . . written by fans for fandom. Wait'll you get a look at the prizes!

Oops . . . almost forget to tell you what I think of this month's cover. I like it, I like it! (As you've no doubt guessed, I'm a person of few words. Reason? No brain.)

Lots of luck to S. S.!—*P. O. Box 31, Danville, Penna.*

You were going great until you owned up to no brains—that ruined the whole thing. But so long as you agreed about VULCAN'S DOLLS you must be a pretty smart doll yourself. Or is it just feminine loyalty?

EXTINGUISHED FAN
by Bob Unsworth

Dear Ed: Here is an S.O.S. from Darkest Africa from an old science-fiction fan, especially STARTLING STORIES. Can any of your readers send any old science mags they have lying around to a desperate fan? I'm afraid I can't offer much in return, to my sorrow, except my most humble thanks or perhaps a couple of old lions or tuskers. Seriously, the magazine situation here is grim and science-fiction magazines are rarer than ten foot pigmies. So if any readers can send me one or two old science fiction magazines he will be bringing a little more light to the Dark Continent.—*L. 106 Mufulira, N. Rhodesia, Africa.*

P.S. THE SEED FROM SPACE and LETTERS OF FIRE in SS May 1951 were two good ones. I hope to be able to read more like them.

Hope they send you some. But the simplest solution for you is a subscription. SS will cost you $3.00 a year, plus 75c for postage clear out to Africa. Good deal?

PEN PAL
by Leonard Gleicher

Dear Ed: Why in the British editions of SS is there no letter column? I know it is no use writing to Atlas and Co. over here for the answer is always "shortage of paper." So I am writing to you, hoping you can do something about it. Also why is there no TWS? SS comes out, though not regularly, even in the abominable British editions.

Now that's finished, let me hand you a bouquet for introducing me to Edmond Hamilton via Captain Future. Also to Henry Kuttner for THE DARK WORLD.

Please, could someone correspond with me from the U.S.?—*Tenterden Gardens, London N.W. 4, England.*

British regulations forbid the importation of American magazines so we cannot ship SS and TWS over for sale on newsstands. A British edition is authorized, but paper shortages keep it down to a 64-page shadow of itself, with letter columns, ads and some stories missing. Your best bet is a subscription which will also cost you $3.75. And the same information goes for Felix Fourie, 5 Webber Street, Port Elizabeth, South Africa.

THE CAREFUL MAN

by Sheldon Deretchin

Dear Mr. Mines: From now on I will do as follows: THIS IS FOR SS. I think now I have made myself plain enuf.

I was particularly interested in the article by Willy Ley as I am the vice-president of the Student Rocket Society, which is of course, a space-flight society.

I didn't like the lead novel VULCAN'S DOLLS too much. For some reason St. Clair doesn't make a hit with me. I did like the short WHO KNOWS HIS BROTHER. Maybe it's because I'm an amateur sociologist or maybe it's just because I liked the basic idea of the story.

Since I've asked you two favors already I may as well ask another. The New York fan clubs are going to hold a regional convention in July and I'd like all fen who are interested to write me—*1234 Utica Ave., Brooklyn 3, N. Y.*

Interested fen, go ahead.

ANTHOLOGIST

by Marion Zimmer Bradley

Dear Sam: You know, I was mulling yesterday over the fact that although promags come and promags go, STARTLING STORIES is the one and only mag that in almost six years of more-or-less active stef fanning, I've read EVERY issue. I haven't missed even a single number.

The mags have long since disintegrated into the trashcans . . . I'm not a collector by instinct. I have, however, made lists of the very finest in this six years of reading . . . and these tales are excerpted and bound into neat volumes. My personal, private anthologies of THE BEST OF STARTLING STORIES. I thought you and the readers might be interested in knowing what they were.

First, in one volume, are my two supreme favorites, THE DARK WORLD of Kuttner and SEA KINGS OF MARS by Leigh Brackett. Why do these rank as top favorites? Well, DW was my first love . . . and like a first kiss, or a first glass of champagne, it stands out above all others as delicious. Reading it over *now*, I find it must take a back seat to many other stories . . . but it still stands head and shoulders above the majority of modern fantasy-stef. The Brackett story is memorable because it combines, in one tale, high adventure, emotional coloring and vivid beauty of language.

Another pair of "supreme favorites," alas, went to rags by pure accident. Both, curiously enough, were by Ed Hamilton, the beloved STAR OF LIFE and his beautiful and moving COME HOME FROM EARTH. These two are probably my two favorite science-fiction of all time.

The first STARTLING STORIES ANTHOLOGY is entitled REBELS . . . and it's just that, a story of rebels in alien worlds. Four of the stories are by Henry Kuttner, WAY OF THE GODS, LANDS OF THE EARTHQUAKE, VALLEY OF THE FLAME and POWER AND THE GLORY. The fifth is Jack Vance's PHALID'S FATE. The sixth is Bryce Walton's THE SLEEPER IS A REBEL.

The "second anthology" is also all-Kuttner. It contains THE DARK ANGEL, THE TIME AXIS, THE MASK OF CIRCE and Hudson Hastings' NOON.

The third anthology is more varied, the name is WHEN SHADOWS FALL, and that is the title story, WHEN SHADOW FALL, by L. Ron Hubbard. It also contains ATOMIC! by Kuttner, TRANSURANIC by Edmond Hamilton, also his VALLEY OF CREATION, Manley Wade Wellman's THE TIMELESS TOMORROW, Frank Belknap Long's HOUSE OF RISING WINDS and SHADOW OVER VENUS, and the unforgettable DARKER DRINK of Leslie Charteris.

Another anthology, alas, exists only in my mind. Why? Because at the time these stories were appearing I had no place to store the magazines or even the excerpted stories. If possible, it would contain the novels I've loved the best in recent years; Brackett's THE STARMEN OF LLYRDIS; John MacDonald's WINE OF THE DREAMERS; Sam Merwin's THE HOUSE OF MANY WORLDS; Fletcher Pratt's THE SEED FROM SPACE, and last but not least, THE STAR WATCHERS.

The current novel, VULCAN'S DOLLS, will never make my anthologies. It's a pleasant little story, but that's all it is . . . pleasant. I hope and trust that going monthly doesn't mean you have to cut the quality of your novels. On the other hand, such a story as THE SHADOWS by Leigh Brackett, if expanded into a book-length would probably be as good or better than any others. But I like la St. Clair, don't get me wrong. In fact, I like most feminine writers . . . why? Because the woman who goes into adventure story writing can portray men objectively as they appear, not subjectively. Men tend to minimize masculine emotions. Compare Ed Hamilton's work with Leigh Brackett's, which it superficially resembles, for instance. Brackett's men are heroes, plus. A little larger than life, as good fictional characters should be. Contrariwise, her women are flat, dead, subjective. (With the possible exception of Emer in SEA KINGS OF MARS.) Now, take Hamilton. His men characters are sticks. They're cardboard, cut to fit the plot. His women are alive, they breathe. Thayn Marden, in STAR OF LIFE, is probably as living a character as Margaret of Urbs in THE BLACK FLAME.

Now, VULCAN'S DOLLS was a beautifully written piece on a clever theme. But somehow I got the notion that Miss (Mrs.?) St. Clair didn't really know how the story was going to end, when she started it. Bad business, that. Makes for vagueness, and some foose little tags never

cleared up. For instance. Why the dolls wept instead of laughing or breathing or something like that. Or whether Kuntiz ever had had a daughter with wings, or something like that. For awhile I thought the doll was his daughter!!' Perish forbid!

By the way, the covers get nicer and nicer. I used to be an expert at the gentle art of folding-the-covers-back-so-no-one-could-see-them, but now I cart them happily home, stare delightedly at them, and wish I could frame them. The luminescent doll on this cover for instance, in the big rough masculine hand. Or the lovely babe on the STARMEN OF LLYRDIS cover. Or the beautiful beautiful rocket-ship for THE DARK TOWER. Or those two pretty ladies for the Merwin yarn. They have clothes on yet! What's-stef coming to? A far cry from the ghastly Bems, the gals in transparent spacesuits, the red-flannel-clad spacemen so rampant when I began stefpanning. This is a wonderful idea!

When cometh another Ed Hamilton novel—or has Ed decided to let Leigh support the family with *her* typewriter?—*Box 246, Rochester, Texas*

Sometimes we think fiction is a mirror too. We look into it and see ourselves, or mirrored images we think we recognize—but no two people see the same faces. I am intrigued by your comparison of Hamilton Brackett, that each produces real characters only in the opposite sex. I am baffled by your labeling VULCAN'S DOLLS a pleasant story and no more. Maybe I'm using a different mirror, but I thought the story was loaded with the most sensitive kind of symbolism—I don't know how you could have missed it. For example you say it was never explained why the doll wept. Don't you remember that she stopped weeping as soon as Haig fitted her wings on and that a force spread from her which Vulcan later explained to Haig was the liberation of mankind's sleeping potentialities?

For an Ed Hamilton story keep an eye on TWS—LORDS OF THE MORNING is due in August.

TIC-TAC-TOE

by Morton D. Paley

Dear Sam: THE WELL OF THE WORLDS was one of the best novels I've read in STARTLING yet—something to rank with THE STAR WATCHERS and AGAINST THE FALL OF NIGHT from any angle you care to look at it. The story had a swell plot and as much characterization as it needed, coupled with Kuttner's superb style, which bears more than a trace of the influence of C. L. Moore. The descriptive passages laid the scenes beautifully and the ending was really a smasher. (Knew it all along but a smasher, anyway). And Virgil Finlay deserves plaudits for his fine job of illustrating.

LADY KILLER bored me, the Sheldon story was too short to bore me but I didn't like it. Whatever happened to Astarita?

I'm surprised at Joe Gibson! That carload of theories (so-called) that he's trying to unload consists mainly of abstract questions based upon equally abstract propositions. "Man *must* love himself." Fine. You love you and I'll love me and we'll both love each other to sort of bolster ourselves up. But just what does "love" mean? Love is simply a word, in itself no necessary quantity—no quantity at all for that matter. Love is not a tangible and the word is used to describe various sorts of feelings not just a single feeling.

I love potato salad (in moderate quantities). I also love Bach's Passacaglia in C Minor. In "A Tree. A Rock. A Cloud." Carson McCullers says that a man can or should love *everything*. Arthur Rimbaud loved Paul Verlaine. I love Rimbaud's poem "Seven Year Old Poet" but to say I do not love the impression I get of Rimbaud would be putting it mildly. 'Romeo loved Juliet.' Right now millions upon millions of Romeos are busily engaged in loving millions upon millions of Juliets.

Going on like this for several pages might succeed in showing the word l-o-v-e stripped of any meaning. We have been so used to hearing poets and philosophers speak of Love as an entity that I think most people have an idea that l-o-v-e means l-o-v-e.

I'm sure Gibson doesn't. What I am objecting to is not his idea, which is probably a very interesting one, but his method of communicating it. No, strike that out. When he takes that idea of his out of the realm of a fancy to be toyed with and starts to prove things with it, I *do* object to it.

Now that I have said that love does not exist corporeally, thereby convincing all who read this that I am a cold emotionless cresture, (and if you persist in thinking of Love as such it's your own fault), let us go on. I am intrigued by the statement concerning a factor which can warp man's "dominant instinct" and make him hate himself.

This reminds me very much of the mental tic-tac-toe that some of our psychologists, psychiatrists, and psychoanalysts, scientists all, supposedly, have been amusing themselves with: the concept of the *Daimonion*. As I gather, the Daimonion is a sort of a whisperer in the dark which tries to convince the person in whose mind it dwells that he is a failure, a sorry creature, better off dead. The Daimonion would soon drive as all to suicide were it not for that knight in shining armor (fanfare) the Superego. Daimonion and Superego are forever locked in combat. Sparks fly, lances shatter, steel clashes on steel, etc. All of which goes to show that anthropomorphic twaddle is very much present in modern psychology.—*1455 Townsend Ave., New York 52, N. Y.*

I'll take the bows for the stories and let you and Gibson fight out your little excursions into the ego. Seems to me though that before you get going you'll both have to define your terms. To say you "love" potato salad is stretching the word love.

You like it, enjoy it, are fond of it, prefer it—but love it? I doubt it. Better decide what love is first.

THE LOWLY ONES

by Margaret Rogers Straub

Dear Ed! This will be my first and last fan letter to any magazine—I hope—but having this minute finished WELL OF THE WORLDS by Henry Kuttner, am all hepped up and in the mood to express my feelings in regard to said novel. No, this is no criticism, on the contrary, it is worthy of highest praise. I presume you already know that we lowly ones who read science fiction, live it, dream it and practically eat it up, become much more efficient in judging the merits of a tale than the so-called critics! Or do you? I started reading out of this world fiction over forty years ago when I read THE MOONS OF MARS by E. R. Burroughs, SHE and MORNING STAR by Haggard. I'd had a most unusual experience myself as a young lady and anything that appealed to the unusual lured me! But to get back to WELL OF THE WORLDS never since the MOONS OF MARS have I read anything like it! I did something I rarely do, I read it all through without laying it down once! It holds your interest, and you actually seem to be along with Clifford Sawyer and Alper in their weird adventure! I can well believe that Kuttner, lived, in his imagination, through all that plot! Either that, or some split part of him lived through it! Most of us have a vague idea, very vague in fact, about neutrons and so forth but before you have finished that story you will *understand* vastly more of this science than you have ever dreamed of! Seldom do I get so enthralled with a tale that I *live* it! But this one is a masterpiece, written by a really *great* author! Unlike other SF fans, I never keep a mag after I read it, but invariably give it away, yet this issue of Startling will be laid away carefully, and kept until at some future day I feel in the mood to read it again, which won't be long! I'll most likely get the urge to read it again within a month! Some day this issue will be a collectors item! My advice to others is, read it slowly and you will find yourself *living* it with those two men!—*5121 Jordan Way, Pittsburgh 24, Pa*

I like that "so-called critics," but you couldn't be meaning us eds, could you? You read the tripe that comes in all day and you get a very sensitive nose for a good story. And when one comes along there is such shouting from the housetops and tears of joy as would turn a heart of stone. For example we have just bought a story which came in cold—unheralded, unsung, unagented. It is called THE LOVERS, by a name new to science fiction, Philip José Farmer, but it is a story, we think, which begins the career of a fine new talent. It is fresh, vital, shocking, etched with acid. Your reaction to it is apt to be violent, one way or another.

But you won't forget it. Look for further announcements.

DOG-EARED EARS

by Dave Hammand

Dear Editor: What I'd like to talk about is Kuttner's novel, WELL OF THE WORLDS. *You called it a fantasy!* It may interest you to know that that story is a science fiction novel ONLY and that in the strictest sense of the word!

A lot more of a science fiction novel than lots you've published recently!

Do I impress you as being slightly on the egotistical side? Being able to separate science fiction from fantasy when others have abandoned the ability to make a distinction as nothing but foolishness? Perhaps—but let me explain. I take a story, read it, and then discover and write in simplest words the plot.

If the simplest equation I get is that boy meets girl, but due to fantastical happenings (that some might consider science fiction), does not get (or definitely lose) immediately, I know I have a fantasy on my hands, but—if the plot *depends* (and, in a way, *is*) based on something scientific or some extrapolated scientific fact then, and only then, is it *science fiction*.

Kuttner's novel reduced to bare structure is a Uranium atom, and *what could be more scientific than that?*

This does not mean that I am against anything *not* science fiction. I'm probably more of a fantasy fan than science fiction. I collect old Weird Tales, read Clark Ashton Smith, Robert E. Howard, H. P. Lovecraft, Frank Owen, Frank Belknap Long, write weird fantasy and burlesques on "science fiction," *but* I really enjoyed Henry Kuttner's novel. Think you could get him to write another one?

Kuttner's novels are so darned impressive! Reading THE PORTAL IN THE PICTURE and its descriptions of Malesco are like distilling the essence of Indian summer found in the treasure vaults of Opar, the ruins of Sehui, the might of Aquilonia, and the fabled wine of Yoros. (Are you enough of a fantasy fan to identify all the places just mentioned, who wrote of them, and where?) A Kuttner novel just sort of swims along in an emotional haze—and that's good!

Your short stories—I'd say that the quality has been steadily decreasing: no Frank Belknap Long, John D. MacDonald, Jack Vance, L. Ron Hubbard future history series. Take the present two. I haven't read LADY KILLER yet, but it doesn't look too impressive. I have read THE HUNTERS.

Why must you allow stories to be presented in which they build up to the point where the villains are earth men? If the writer is just going to build up to that, why does he have to drag in a lot of irrelevant matter about the setting and make it sound just like the United States? If he's going to have something likeothat he can at least be impartial to the setting. And why—I'm asking why—do you allow that super hackneyed phrase that always pops up in these things to be dragged in by dog-eared ears? I'm speaking of "which was third from the sun and had one moon."

There are few things more annoying than hearing about the third planet from the sun that has only one moon. It wouldn't be so bad if it had been done twice before, a dozen times even, but

when it gets to the point when "If twenty men could count one story every second for twenty-four hours a day, all year around, and if they had a life expectancy of 150 years then they would almost—" then is when I draw the line!

In reference to your editorial "A vacuum is neither cold nor hot. A vacuum resists any change in temperature," skipping a sentence to "So a man adrift in space would be beautifully insulated against loss of heat, by the vacuum of space."

Allow me to consider that: granting the premise that space is a vacuum, it is obvious that heat could not escape by convection because there is no air and it could not escape by conduction because there is nothing for it to touch. There is the third way: radiation. Returning to your simile of a man in space to the contents of a vacuum bottle. Did you ever examine the liner of a Thermos? It has a silvery coating. Why? To reflect radiation, of course.

Now, considering the radiation from the distant stars, etc, that might create a problem, but, it seems to me that the capacity for a material in a vacuum to absorb heat is less than the heat it can radiate—which is to say that no matter how much heat you pour on to it, it bounces it off into space a lot quicker.

Space being a vacuum has *no* temperature to my way of thinking. Allow me to clarify that; what is heat? Heat is the action of molecules; if molecules in a substance are very much excited, that substance is hot (I'm limiting this to one state of matter, either solid, liquid, or gas); if the molecules are all moving slowly, it is cold. Since space has no molecules—we're calling it a vacuum, y'know—it can have no heat, but yet it allows heat to pass through it.

The whole thing beats me. Maybe the first space ship will have a mirror finish on the outside to reflect the heat from outside and a mirror finish inside to keep the heat in!

Just in case this letter *does* have a chance to be printed I'd like to put in a plug for the PSFS (the Philadelphia Science Fiction Society). We're a club whose purpose is the study, discussion, and advancement of weird, fantasy, and science fiction. Our members include L. Sprague de Camp, Les Phillips (author of *The Misfaid Charm*), Dave Eynon (Weird Tales author), Will Jenkins, the publishers of de Camp's *Lost Continents* (Prime Press) who are Ozzie Train and Jim Williams; our club boasts a large fantasy fiction library both book and magazine, our walls are heavily adorned with various originals—even an original Paul cover from the "good old days"! If anyone living in the Philadelphia area or able to get there for meetings every other Sunday is invited to write to me, the secretary, for dates, time, and a list of programs coming up that may be of interest to you.

If, sir editor, you can find some space to fit in the above I'd be greatly obliged—obliged enough to write you several short stories considerably below the level of your own (an achievement in which I take considerable pride).

I'm overstaying my welcome so to make parting sweet I'll say that you've got magazines with the best novels and novelets a-going—but those miserable short stories!—*Box 89, Runnemede, New Jersey.*

In most voluntary reader polls of the "best" stories in an issue the long stories are usually rated first. This, at superficial first sight, appears like corroboration of your stand that the short stories are miserable. But this offends our logic. By and large the short stories are by the same authors as the long, it isn't reasonable that they should consistently be good in long lengths and bad in shorts. This idea is further backed up by our own observation that the novel is usually rated first even when the novel is no world beater and a short in the same issue might have been a gem. It is my feeling that readers are invariably more impressed by the novel because of the size and scope of its theme and because in a story of that length you eventually get to know the characters as intimately as your own family, and so feel closer to them.

As to who is writing our short stories, Frank Belknap Long has been out of circulation for a while, but is coming back—we've just bought a story of his. Jack Vance has been supplying us with regularity. In addition to the novelet in this issue, we have two shorts: NOISE and THREE-LEGGED JOE scheduled for TWS, and a short novel CHOLWELL'S CHICKENS, also for TWS, and a new Vance novel, BIG PLANET, for SS probably around September.

MacDonald is doing books full time and L. Ron Hubbard—well, you know what he's doing. But don't get the feeling that this is the end of the world. There are a couple of new boys coming up who've got plenty. Keep an eye peeled for stories by Roger Dee, Charles Fritch (a burlesque on Captain Future slated for SS and a howl) Phyllis Sterling Smith, Miriam Allen de Ford, Robert Donald Locke, Joel Townsley Rogers, Philip Farmer and R. J. McGregor. Watch for short stories by these new writers.

NEOPHYTE

by Jean L. Mnara

Dear Mr. Mines: You people who publish, read and write science fiction seem to be in a group by yourselves, with some subtle kind of interest and intelligence in common. It's very intriguing. I've been a reader of your fine magazines for several months now and my interest and curiosity are growing steadily.

Does just curiosity and a feeling of kinship admit me to your secret society? I feel like Mr. Joe Gibson who writes such wonderful letters in TEV—I too am striving for the ultimate in civilization—the complete brotherhood of man. And if some day it turns out that other planets have life on them, I don't doubt Mr. Gibson will find brothers in them too—however BEM-like they may be.

I'm not laughing at him, even if it does seem so. I'm all for the continued growing, both upward and outward, of every person's soul If more people believed as Mr Gibson does, wouldn't that distant goal be far closer?

I'd like to write something and submit it to you, but the more I read, the more I realize my ignorance How wonderful to be able to write the golden fantasy I found in Henry Kuttner's WELL OF THE WORLDS Or the rather cute combination of humor, pathos and tragedy in Chad Oliver's LADY KILLER. I laughed and shuddered together over that one. When I saw his title I muttered "Plagiarist!" for I thought he'd been reading my mind (I wrote a story about a world with no women) but now that I've read it I forgive him Is Mr Oliver really a student? He writes amazingly well. I know, I've studied and practised writing for the past twenty-five years—since I was eight However, now that I've got science fiction on the brain my desire for more learning is consuming me and it is very frustrating for I'm a housekeeper, wife and mother of five Ay-rabs so I don't get much time to write or read either Where can I get some of this kind of literature in digest form?

I see you do have some women writing for you. VULCAN'S DOLLS was beautiful

There must be some other science fiction fans in this part of Pennsylvania since I nearly always just get to town in time to grab up the last copy but I don't know who they could be, or whether they take this stuff as seriously as I do or just read for escape. Guess you don't know either, hey?

I wanted to write and see if you people are entirely exclusive or if you have room for one more thinking, hoping, praying human —*Shinglehouse, Pennsylvania*

P.S. Where can I book passage on one of the earlier Moon rocket ships?

The exclusiveness you seem to detect in these columns is only shop talk and you apparently know most of the lingo already. Fans are scattered all over the world and write to each other voluminously Far from being exclusive, I'll bet you have just let yourself in for a barrage of mail the likes of which you have never seen. Consider your solitary confinement at an end. I hope you have fun And thanks for all the nice things you said about us.

You can book passage on a rocket ship at the Hayden Planetarium, New York. There'll be a short wait for seats.

SHEER COURTESY

by Gregg Calkins

Dear Sam Well, here I am back again Just wanted to let you know what I think about the March issue, *and* put in a little plug for my own 'zine. Also, I want everybody to note the new address I've got—mailmen frown on forwarding mail all the time it seems

Out of sheer courtesy, I'll discuss *your* 'zine first OK, Sam? The cover Bergey bem's again. I s pose it'll have to do, but how 'bout another by Schomburg? The least you can do is alternate them Lessee . . . we've had four issues now with your name at the mast-head I realize you aren't due the credit for all of them, but let's work on that assumption—it's to your benefit to do so First off was November of '51—that was a terrific cover Words fail me for description The stories were excellent, too Next came January '52—another wonderful cover, this time by Bergey, just to prove that he *can* do good stuff if he wants to try The novel was one of the best I've ever read For February, we got another Bergey, more on the line of the old Bergey, again—a doll, scantily clad. That's ok with me—if you don't run it into the ground (The story, incidentally, was a STINKer!) With this issue we have a second Bergey in a row with the girl doing a perfectly inane action This is getting dangerous, Sam—if you repeat performance in April

We come to the stories—WELL OF THE WORLDS kinda disappointed me for Kuttner It was neither a good nor a bad story—that's below par for SS Crossen's novelet was really good, as usual in the ones you've run I took forward to a lot more by Crossen The shorts I read but disregard unless exceptional, and none of these were, so I won't mention them.

Bixby makes the best fanmag reviewer I've ever seen, with a few close exceptions It's getting so I really enjoy that department Bix makes you feel that he really appreciates the 'zines he reviews, and you know how warm a spot he earns in a faneds heart by doing that JB, we love you —in the other review department, Science Fiction Bookshelf, somebody is falling down on the job Actually, Sam, there are so many book reviews around that we don't really need another Why not give the space to the letter column? A lot more people would be satisfied that way—why not ask them and see?

Your fact story is almost always good and TEV, naturally, is the best part in the whole mag. Upon delving lightly into your editorial I come up with the following, among others, statement. Yes, we do feel writers should occasionally read a science book and learn just what they are writing about. We don't mind guesses, Sam—extrapolations is the word, I believe—but we hate errors. We don't mind a s-f story based on a theoretical point in science (ie, life on Mars, Venus, etc) but we hate out and out errors due to ignorance! Even a minor one, like somebody giving the atomic weight of Oxygen as 17.500 for instance When writers don't understand known scientific principles as those of molecular motion or diffusion, for instance, it kind of makes us wonder if we *are* reading trash There's got to be *some* science in s-f, however little

We turn to the readers letters themselves Callaghan earns my wrath for disliking THE GAMBLERS which I enjoyed immensely, and I doubt very much his statement that he was able to guess the ending from the title and first paragraph You're right—there wasn't much of a letter column in this issue I accept your explanation, however, and expect to see a bigger one for April, (with my letter in it, incidentally) so I forgive you—this time!

And now we come to my little plug OOPSLA is the name Sound horrible? I like it So, for

your information, does Shelby Vick and Tom Covington. However, we're a minority, so I'd appreciate hearing from somebody on the subject. OOPSLA is published every six weeks, 10c each, 8 and the annish for $1. At the time I'm writing this #2 is due out in about three weeks. By the time this is printed, #3 should be just out. In #2 will be Shelby Vick, Wilkie Conner, RJ Banks, Lemuel Craig in a powerful article and others. Something new with OOPSLA is the policy of *at least one illo per page*, and *good* illo's—all of them. Each issue is a minimum of 20 pages, and the annish will be upwards of 60 pages.

If any of your readers do want a sample copy, please enclose the dime, as I'm still in the position of financing the entire cost myself and don't even have enough for the postage yet. Those dimes really help. Try a copy—what can you lose? The cost is only that of a comic book, and who prefers a comic over a fanzine? Let's hear from you.—*761 Oakley Street, Salt Lake City 16, Utah.*

Well, you made it, after being crowded out of the May issue—those letters which didn't get printed were a lot more complimentary than this one. Your standards baffle me a little bit: JOURNEY TO BARKUT was great, VULCAN'S DOLLS a stinker and WELL OF THE WORLDS disappointing? H'mm, have to take a look at OOPSLA.

WATER UNDER THE BRIDGE

by Henry Moskowitz

Greetings and Salutations. This thing has finally got my goat. I don't like it, not one bit! Graham B. Stone added the proverbial straw that broke the camel's back. Quote: And the recognition that humans are divided into two sexes, or if you prefer, that women are human, I appreciate more than the usual treatment of the skirted characters as a different species from the trousered, or Boy Scouts ones. Unquote.

Whatinell is wrong with Boy Scouts? Sadly, many people show Scouts as goody goody boys. They're not, really. Many Scouts are average joes. Some of them have had real-life dangerous adventures. Take a look at *Boy's Life* some time.

Let's take our monthly peek at SS.

Cover—Well, the lady didn't quite lose her head, did she? This one isn't as good as January's and February's. A Bergy, no doubt.

Stories.

THINGS OF DISTINCTION—I don't see why Kendell Foster Crossen bothers with anthologies, when he writes so well. His stories are so darn enjoyable. I was right. This story had priority over the lead. Jerry Ransom is very much like Manning Draco in TWS. I'd like to see what happens to Ransom Halos, Inc., wouldn't you?

LADY KILLER—Chad Oliver dood it again. More!

THE HUNTERS—Short and sweet. And I don't get it! If they looked so much like us, why should we kill them? This is Walt Sheldon's last piece, isn't it? Now that he has returned to the Air Force.

Now for the departments.

TEV—The editorial was good. There wasn't too much meat to pick over in the Ethergrams. So comments.

Cpl. Grant C. Callaghan—Maybe you meant "Nu"??? (Sam If Sam was selling three stories a week where did they go to? And yours, too.)

G. B. Stone—Just because of that remark of yours, I shan't attend that convention.

Donn O'Neill—There's another Future fan for you, Sam. How about it?

Chester R. Johnson, Jr.—Sam wouldn't give that pie up. I know. I tried! Hah!! I 'spect it goes to the Chicon II, maybe.

Sam—Glad to hear Jerry Shelton is coming back. I'd like to get those stories, too. Any one got 'em? That sounds like Bill Tuning, all right. Did you buy his story?

SF Bookshelf—Good.

RotCSFFP—Omar McBarsoom. Why is Mr. McMars Hankuttner? Bixby and Merwin can't be Bea Mahaffey. She's too beauteefool! She ain't 'uman. Can't be. She must be a robot to be so beautiful. (Wait! I didn't say that. Somebody did, though. Who? Tune in next month, same mag.)

THE WELL OF THE WORLDS—I'm different. The last novel of his that I read was about 2½ years ago. September, 1949 issue of SS. Anyway, I just lapped it up. 90 whole pages. Boy! Man! Wow! The story was great, too. Gad! that length! "He walked toward Zatri and toward Klai." And this boy headed toward his bed. Good night.

Illos—I wish the novel was more profusely illustrated like the early SS's—the second issue, to be exact. The best illo was for THE HUNTERS. Poulton did it, no?

I guess this an off-month for me, too. But maybe this being a shorter letter it will be printed, huh?

Say, are you in your office on Saturdays? Speak up, man!—*Three Bridges, New Jersey.*

Ken Crossen is currently toying with the idea of doing a full length novel about Jerry Ransom—that make you happy?

Yep, Sheldon is in Japan, I think. May get some stories.

Why do we kill creatures like ourselves? Are you kidding?

Sam Merwin did stf and detective stories mostly: I did westerns, detective, a couple of stf, some love, sports, flying, newspaper features and what have you.

Bill Tuning—nope. He's a genius, but. . . . I repeat, this office is deserted on Saturdays.

Contribute to the 1952
RED CROSS CAMPAIGN
GIVE!

You come ahead anyway. I'll leave a note under the door for you.

THE ANATOMY OF HUMOR

by Edward G. von Seibel

Dear Sam: In my letter to you in the March, 1952 issue of *Startling*, it seems obvious you misunderstood the purpose of the letter. The misunderstanding stemmed from your misinterpretation of my use of the word "objective," which was *not* negative to your viewpoint as you thought, but instead was intended as dispassionate. It's too bad too many words contain more than one meaning—too many people misunderstand one another that way. The word as used there was intended to be only a humorous allusion to negative while the actual meaning was as I have indicated. Perhaps though, I did not make myself pellucid enough; however, I suspect that you have: (1) a lack of a sense of humor, (2) a suspicion of the contents of fan letters, and (3) a suspicion of the contents of my letter.

Your reply, however, on page 136 indicates that (1) is faulty and therefore untrue, and that you were bothered by my asserting I would be back next month, this bothered attitude being the result of your thinking my letter wasn't good enough to have appeared in a previous issue. This latter thusly negates (3). I assure you, my letter was quite of good enough, superior enough quality to appear in any issue of your magazine. The reason it appeared in the issue it did is because of the scheme of yours I have exposed in a previous letter. Therefore I'll not censure you for your reply.

But there is one thing I do object to, and that is the changing of the contents of my letter in places. I am referring to your changing "callous" to "callus" and thusly blunting the whole depth of humor of the inference. What I object angrily and strenuously to though was your removal of a sentence in a paragraph and the changing of the remaining sentence slightly in a manner designed to make it appear I called myself of lower mentality than normal, plus the fact that your meddling took away all the humor contained. For that I demand an apology.

As for your asserting that THE CYBERNETIC BRAINS and THE OTHER WORLD are gadget stories fitting the definition number one by J. W. Campbell, Jr., in *The Best of Science Fiction* (and why did you capitalize the "of" in my letter?) I would disagree, not entirely, however, since there was a faint essence of it in THE CYBERNETIC BRAINS. Both were of poor quality as science-fiction, and hardly deserve the name. THE CYBERNETIC BRAINS contained so many minor faults it wasn't even funny. I wonder if Jones ever even saw a brain? THE OTHER WORLD isn't even worth a brief comment on; it was nothing but that abortion of an already aborted fantasy, pseudo (false) science.

Judging by your latest novel, which I read only enough of to satisfy me it was fantasy, your magazine has been sidetracked from the correct literary vein and is now going down to the end that is inevitable for the course it is following. From pseudo-science you have now dropped to the low, hardly better than, type of fantasy, contained in Fantastic Adventures at my last reading of same, which was some two-and-a-half years ago. This was probably due to your misinterpretation of the reason why so many fans liked WHAT MAD UNIVERSE. Actually, it wasn't what you thought it was, but instead was the fact that despite everything, the fans could make themselves feel that they were in the story, that it was *real*.

Your editorial you realize as well as I the fault of, so I shall not take the time in this letter to elucidate. I'll tell you this, though: After I read your editorial I picked up the latest copy of Astounding which had just arrived and happily told myself there is at least one editor who has intelligence.

The cover I tore off your magazine, and so cannot comment on it, except for this bit of humorous jesting. Is that how you sell your magazines?
—*Box 445, Olivehurst, California*

Finding myself somewhat baffled by this incoherent but lengthy missive, I was forced to the ridiculous extreme of going back and re-reading your letter in the March issue, which immediately plunged me into the deepest gloom. Job was a piker, what could be my sin to be so punished with this drivel? You're right about Campbell, he's too smart to print, or answer, these alleged letters.

Anyway I read it, with attention to your squawks about misinterpreting the word objective etc., and received the unhappy impression that I had just lost some of my marbles. No matter how I read it, "objective" comes out "objective." And as for the difference between "callous" and "callus," granted that one has a psychological slant and the other a physiological slant, in application they mean so much the same thing that they are interpreted the same way, and that's what counts.

What are you actually beefing about, sonny, is that you expected your letter to be a howling piece of humor and when it appeared you were so disappointed that you turned on me—or the printer. Hah, I warned you about Machiavellian tactics, didn't I?

SS is not taking any slant towards pure fantasy, as already explained somewhere above. In fact, see Bob Hoskins' letter in February, in which he complains that there is a preponderance of space opn among SS novels. What's fantasy to you is space opera to someone else. See you around.

A note from Nan Gerding says she made a mistake in asking for a 1933 ASF containing Wallace West's story DRAGON TEETH, should be September 1934. Anyone got one write to her at Box 484, Roseville, Ill.

Until next month . . .

—THE EDITOR.

REVIEW OF THE CURRENT SCIENCE FICTION FAN PUBLICATIONS

WE HAVE received one, two, three, exactly four letters informing us that our introductory remarks in this column are overlong, too *damn* long, of no special interest to fans, and "cruddy." In deference to this unhappy quartet, and in the hope that several itinerant *bacilli influenzae* will happen along at the very moment their mouths drop open in astonishment, we shall proceed directly to the fanzines, to wit

BEGINNING: THE FUTURE, Box 1329, Grand Central Station, New York 17, New York. Editor: Mr. U. Published weekly. Distributed free.

A most curious item . . . someone is apparently determined to put out a successful fanzine or bust a gut trying. We now have five issues (weekly) of BEGINNING: THE FUTURE on hand, and here they are in order:

(1) At first we thought it was a gag. B TF crept modestly into our office—one lone, self-conscious sheet of ordinary notebook paper covered with pencil scribblings—and, with it, a letter imploring us to grant the effort a half-inch or so of our attention. The first issue served to introduce its editor, "a fan . . . and . . . professional writer [though not of science fiction] . . . [who] edit[s] news for a trade newspaper in the laundry industry," and went on to apologize for the lack of a typewriter, stating that B TF would for the time being be handwritten aboard train "as I commute daily via the Long Island Railroad," and further, in explanation of the whole affair, that ". . . Between two relations and myself, we formed a company, and secured a P O Box. The three of us shall be known as one individual called 'U.' U naturally standing for Unknown. Sometime during the year, if this is successful, I'll let my name slip out." The issue concluded with the promise that "stationary" and a typewriter were in the offing, and the suggestion that the reader might enjoy Orwell's *1984*, ". . . a rather interesting social, economical and political satire."

(2) Same format as the first . . . contained news of a 12% increase in circulation, i e from 8 to 9; also news that a typewriter, stationary and a *hectograph* were in the brewing, and a deal for mimeographing underway. Also a plug for Clyde Hanback's STFANEWS, and the announcement that "U" and his group were forming a fanclub to be called the INTERGALACTICIANS.

(3) Same format, though now handwritten in ink instead of pencil . . . a book review, of *Two on an Island* by C. Paul Lent, and several so-so news items.

(4) The typewriter has arrived. B TF, still one sheet, benefits considerably thereby.

(5) Neatly typewritten . . . and a 'News Flash!" notable for its ambiguity. "Reports have reached us regarding an organization actively sponsoring a fan club which is listed as subversive by the United States Government . . . we shall reveal the name of the organization as soon as we check with the F.B.I." Also more attempts to recruit members for the new club, which is now (and throughout the preceding two issues) stubbornly spelled INTERGALATICIANS.

Well, there it is . . . and darned if we know what to say. But we rather admire the spirit of "U" and his friends; there is an appealing air of gung-ho surrounding the endeavor, so we'll just wish 'em luck and look forward to the fancier, more substantial B TF we imagine they have in mind. We find it a bit difficult, however, to reconcile "trade journal, commuting, professional writer, etc. . . ." with the misspellings and general air of, shall we say, youthful exuberance displayed in B TF, and with the cloak-and-dagger business of "U," and with INTERGALATICIANS, so maybe there *is* just a wee bit of leg-pulling going on, h'm?

FLASH! (Feb 10th, 1952—10 48 A M.) Issue # 6 of B TF just arrived . . . hectographed. An announcement: ". . . we have finally secured an A. B. Dick mimeo, and will [two lines utterly illegible] not cover much news. If you have any news . . . for example regarding local doings in your own neighboring fan group, international items of fan interest, the announcement of forming a new fan group, fanzine, or prozine, etc., we would be greatly indebted if you sent such to us."

One cannot but admire. Okay, gang . . . one—two—three . . .

RENAISSANCE (formerly COSMIC), 40-14 10th Street, Long Island City 1, New York. Editor: Joseph Semenovich. Published irregularly. 10c per copy; three for 25c.

Like someone once said, or should have said, young fanzines have a way of improving. This second issue of RENAISSANCE (née COSMIC) is no exception, representing a healthy improvement over the first in those matters which go to make a fanzine enjoyable or not: the nature of the material, the way the material is treated and written, the way the writing is reproduced. For

all of which, congratulations to Semenovich and company. Cover by Lombardi, stencilled by Lee Hoffman; fiction by Charles L. Morris; articles by Robert Brady, L. L. Shepherd, Toby Duane, Bob Silverberg, T. E. Watkins, Emory H. Mann and Nan Gerding; poetry by Ed Bartley. An editorial by Semenovich completes the issue.

SCIENCE FICTION NEWS LETTER, Box 702, Bloomington, Illinois. Editor: Bob Tucker. Published bi-monthly. 15c per copy, seven for $1.00.

The "annual book number," containing a check-list of U. S. stf books published in 1951 (compiled by Sam Moskowitz), a passel of book reviews by Tucker and others, and assorted book chatter. Lively news and views, as always.

No, They Aren't!

Next we have a letter from Joe and Helena Schaumburger, who fervently ask us to make public, for the special attention of a certain anonymous nitwit, the fact that they, singly or together, are *not* artist Alex Schomburg. As we understand the situation, a fan has been deluging them with letters claiming they are Schomburg, they *are*, they *are*, and lately has taken to telephoning them during the small hours of the night, waking the baby and causing all kinds of hell. So . . . for what it will mean to that kind of mentality, they aren't Schomburg, and he isn't funny.

COSMAG/SCIENCE FICTION DIGEST, 57 East Park Lane, Atlanta, Georgia. Editors: Ian T. Macauley and Henry W. Burwell, Jr. Published irregularly. 25c per copy; six for $1.25.

Two fanzines in one . . . the Digest, edited by Burwell, and Cosmag, edited by Macauley. SFD continues its policy of reprinting worthwhile items from the field, in this issue *The Immortal Teacup* by Walt Willis, *October Observations* by William Young, *Question and Answer Man* by Bob Tucker and *Slant in Review* by editor Burwell—all enjoyable, with Willis and Young especially so. The Cosmag section presents fiction by Tom Covington; articles by pro-author Roger Dee and Capt. Ken F. Slater, "features" by editor Macauley, Jerry Burge and Peter J. Ridley . . . a mixed selection, from good to middling. Makeup, artwork and reproduction quite good.

This twinzine, by the way, has two addresses—one for each head—but the one listed above must suffice for the nonce, we dredged it up from our (reliable, we hope) memory, after some scoundrel swiped the 'zine off our desk.

EUSIFANSO, 146 East 12th Avenue, Eugene, Oregon. Editor: Roscoe Wright. Published irregularly. 10c per copy.

Attractive cover . . . touch of Wallace Smith to it. An amusing short story by Marje Blood; a

[*Turn page*]

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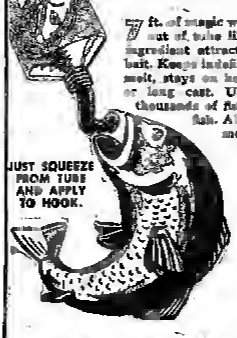

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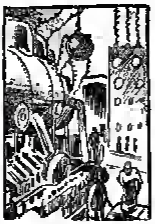

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review of *Space Medicine* by Gerald Pearce; a eulogy to Sam the Merwin by Marion Bradley, a rundown on stfilms by Lemuel Craig, with whom we are tempted to quibble but won't . . . *de gustibus,* and all that. Also a preview of a new stf artzine expected to be published around July of this year; art-and-poetryzine, to be more exact (judging by this sample). Its resounding name: CONCEPT. The poems we liked, which surprised us; we usually don't. Of the artwork we thought two items rather good, one so so, one a little silly.

FANTASY-TIMES, 137-03 32nd Avenue, Flushing 54, New York. Editor: James V. Taurasi. Published bi-weekly. 10c per copy; 12 for $1.00.

Newsy, neat, up-to-date . . . fandom's top "newspaper."

THE IMMORTAL STORM, by Sam Moskowitz; obtainable from Henry W. Burwell, Jr., at 459 Sterling St. N. E., Atlanta, Georgia. (Is this COSMAG-SFD's other address?) $2.00 per copy.

Subtitled "A History of Science-Fiction Fandom," this colossal work covers in great detail (180 well-mimeographed pages, a staggering 225,-000 words) the history of organized fandom from its beginnings in the early '30s up to and including the First World Science-Fiction Convention on July 2, 1939.- Now, we personally have never been a fan qua fan and, in fact, had never even known that fandom existed until we entered the field professionally; so we walked into these 180 pages wide-eyed and innocent . . . and damned near died laughing. For this account of the bubbling broth of petty politics, back-biting feuds, skullduggery, bitter ideological disputes, lawsuits, gripes and grudges, adolescent posing and dead-pan concern with trivialities that made up "The Immortal Storm" of that period is worth many times the asking price. Here you will learn how—h'm, we'll just whip up a few hypothetical examples—how scowling little fifteen-year-old Jimmy Heffiefinger (now a prominent pro) picketed a meeting of the Galloping Gernsbacks, along with —— —— and —— —— (two other now prominent names), and how umpteen-year-old little —— —— (now a well-known editor) and several others (more Big Names) came storming out and tried to kick the picketers into the next county. And more of the same . . . it's guaranteed to roll you in the aisles, unless you regard science fiction and fandom a good deal more earnestly than we do, in which case you are by now hating our guts.

"The Immortal Storm" must have taken years to write, and more research than your reviewer even likes to think about. Moskowitz has approached his subject seriously, with no little skill, and, so far as we are able to judge—and we know some of his personal peeves.—commendable objectivity; the chaos and complexity of the period which he records cannot detract from the fact that he has done a first rate job of reporting, and if anything emphasizes the work's organization and readability, but we simply refuse to take the whole thing that seriously. Fandom is, and has always been, and will always be, much more than an expression of interest in science fiction: it is a way of life that passes strange, a heart-warming and blood-chilling thing, and we find, and have

always found, and will always find, certain of its aspects rib-tickling as well. Sorry, Sam, for our heresy . . . but we'll bet the orders roll in.

STRAIGHT UP, 37 Willows Avenue, Tremorfa, Cardiff, Glam. S. Wales, Great Britain. Editor: Fred J. Robinson. 3/— per year, six issues for one promag.

This item from over Cymru way perks up the Welch in us . . . STRAIGHT UP discusses stf books, movies, promags, fanzines, pocket books. Also a bit of editorial chatter, during which Robinson announces the inauguration of a "joke competition" and requests submissions: ". . . but please, send us ones that we CAN' publish."

Carry this a step farther . . . why doesn't someone produce a "jokezine," specializing in stf jokes only; no other form of stf humor admitted? Great possibilities there, wethinks.

CRITI-Q, Box 89, Runnemede, New Jersey. Editor: Stephen Craig (Dave Hammond). Published "on a somewhat regular schedule." 10c per copy.

A supplement to issue-#1, this contains additional Howardiana, on article entitled *The Short Story in Fantasy and Science Fiction*, and a Howardish story by Craig-Hammond which, though not at all bad, does little to convince us that one writer's deliberately setting out to imitate another is a labor that makes any sense.

Oh, Mines!

H'm . . . about three inches of space to fill up here . . . well-l-l . . . on one wall of our SS/TWS office is a collection of newspaper clippings that might amuse you, every so often a new one is added, to the delight of everyone except our beloved Sam Mines. Follows a fair sampling:

Full-Size Mines Tested in Laboratory
Report Mines Will Reject Pension
Mines May Go on 3-Day Week
Helicopter Sees 61 More Mines Off Korea Coast
Mines Still a Menace
Reds Form Ranks, March Over Mines
Virgin Mines Are Reported in Both Spain and Czechoslovakia

And that's all for now. Lots of fanzines lined up for the next issue . . . see you then.

—JEROME BIXBY.

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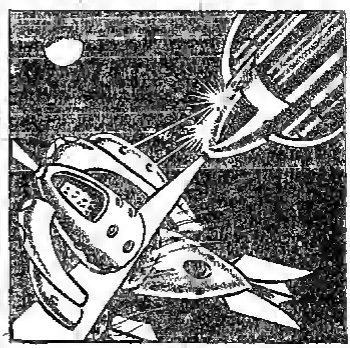
Reviews of New Books

THE GREEN HILLS OF EARTH by Robert A. Heinlein, Shasta Publishers, Chicago, Ill., 265 pp. $3.00

It is a temptation to say that this attractive volume contains some of Bob Heinlein's best stories, but when a writer has turned out so consistently high an average of work, the word "best" becomes elastic. The question then becomes: "best" of which period of his development? Fortunately, this happens to partake of a good and interesting period of the Heinlein development, a period of slick writing and painstaking craftsmanship. Heinlein's long suit is his knack for piling up such convincing detail that a story of highly improbable events in a



misty future seem as real and living and plausible as though they were really taking place now.

For example, in DELILAH AND THE SPACE RIGGER, the first story in the book, the theme is one of human relationships—the complications caused by an unexpected woman employee on a construction job in space which had been exclusively male. Yet this is a case of a prestidigitator's misdirection, for the real protagonist is not human at all; it is the construction job itself. The people, human enough and believable enough, are simply dwarfed by

Heinlein's faculty for hammering home the awesomeness of their surroundings. This, it need hardly be pointed out, is top-flight science fiction, this nice blend of real people and realistic space gadgets. Heinlein doesn't have an axe to grind in the Bradbury sense of scoring a point against the human race, these stories are more like the most painstaking reporting without intrusion of the author.

Of the ten stories in the collection, six are from the slicks and four from pulp. Such a combination tells volumes about science fiction and its standards.

o

TOMORROW AND TOMORROW and THE FAIRY CHESSMEN by Lewis Padgett, Gnome Press, Inc., New York, 254 pp., $2.75

It is something of a surprise to this reviewer that connoisseurs of science fiction have not made more of the striking differences in the work of Lewis Padgett and Henry Kuttner. The Padgett stories were hand-tailored to fit a definite formula: they are cerebral, cold, diffuse and deliberately difficult to follow. The Kuttner stories are warm, emotional, imaginative and brilliantly pellucid. That the same man could write in such diametrically different styles is only another indication of the phenomenal Kuttner talent—the topmost talent of our time.

It is axiomatic, therefore, that almost anything Kuttner does will be interesting, but for myself, the Padgett stories run second to the Kuttner stories. Serious collectors of science fiction will delight in this volume, with a handsome dust jacket design by Harry Harrison. But the casual reader will merely be baffled by the deliberately obscure style, the abrupt transitions, the lack of explanations, the premeditated method of starting scenes in their middles.

TOMORROW AND TOMORROW is a study in mental breakdown. A nuclear physicist guarding an atomic pile recognizes, in his recurring nightmares, a smoldering conflict which presages mental collapse, suggesting, as they do, that he murder his fellow guards and detonate the pile. His conflict stems from unconscious rebellion against the too-perfect and repressive government of his time and he is eventually drawn into the revolutionary movement through the hypnotic influence of his wife —who incidentally is infected with cancer and is already numbering her days. This very grim plot is handled in broken, chaotic fragments intended to heighten the shadowy, moody atmos-

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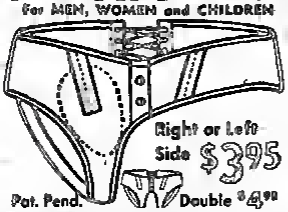

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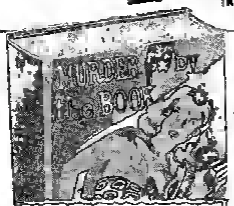

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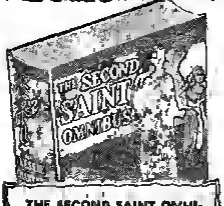

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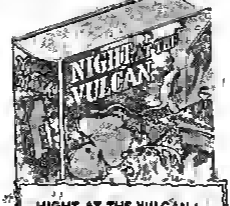

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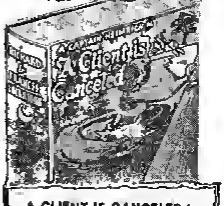

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